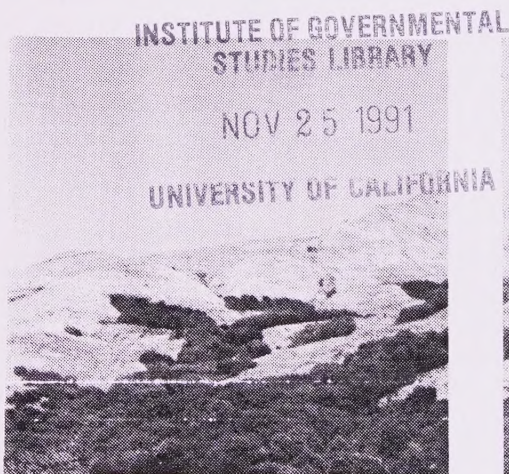


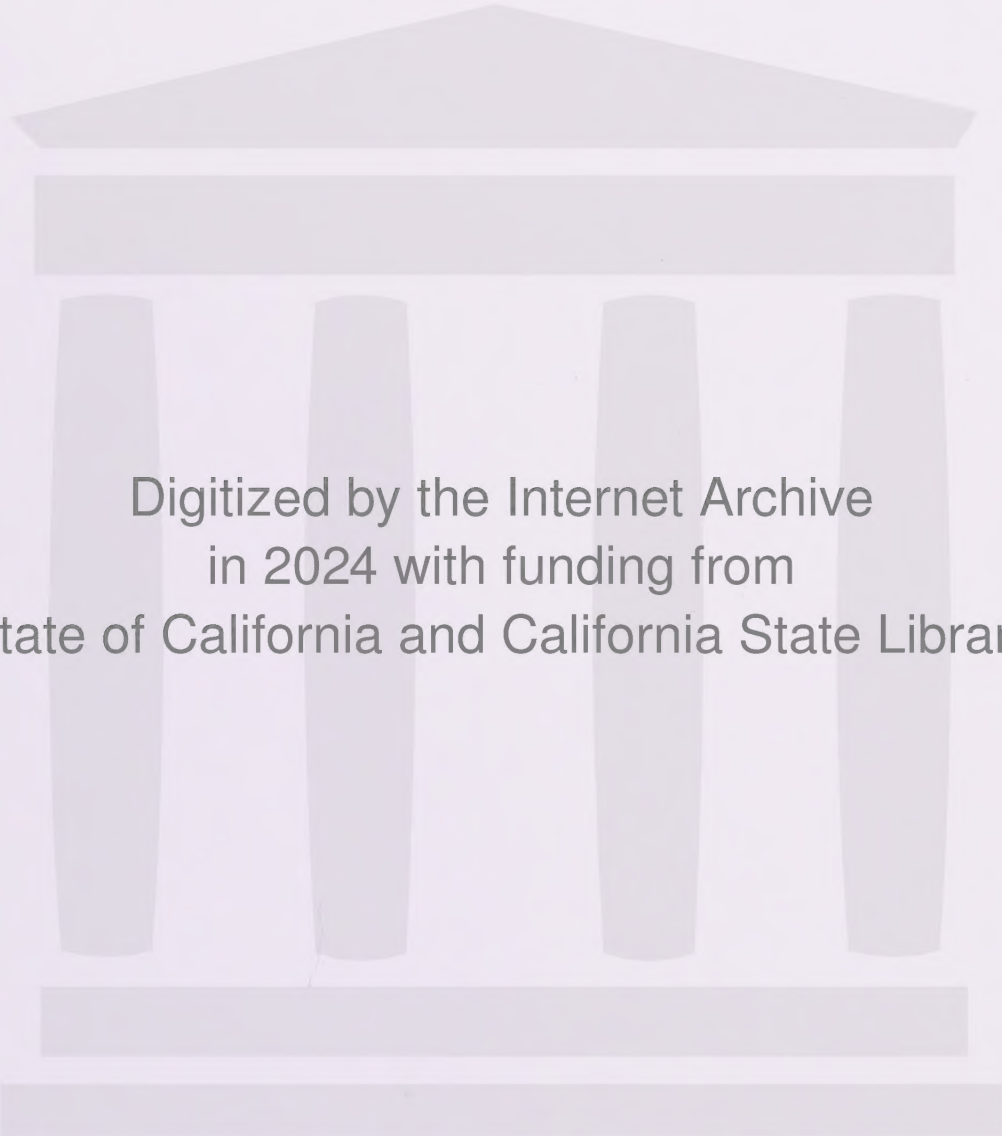
TILDEN REGIONAL PARK

Land Use-Development Plan and Environmental Impact Report



East
Bay
Regional
Park
District





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TILDEN REGIONAL PARK
LAND USE-DEVELOPMENT PLAN/
ENVIRONMENTAL IMPACT REPORT

LUDP Adopted: July 19, 1988

EIR Certified: July 19, 1988

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Prepared by:

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FOREWORD

In the hills above Berkeley, two ridges traverse Alameda and Contra Costa counties roughly from north to south, forming between them the valley and canyons known as Charles Lee Tilden Regional Park. Tilden was the first in a chain of regional parks that now extend along ridge and valley above the east shore of San Francisco Bay, and for over fifty years has provided a rich variety of recreational experiences for many thousands of East Bay residents. From breathtaking views along the ridges overlooking Tilden to the diverse natural environments found in the Park's forests and grasslands and along the course of Wildcat Creek as it descends to San Francisco Bay, Tilden Regional Park holds the deepest affections for all those who work and play in its environs.

The last adopted Plan for Tilden Park called for extensive development of recreational facilities throughout the Park's 2,164 acres. This new Plan is a significant departure from the 1964 "Forward Plan." A fundamental recognition of the 1988 Tilden Land Use-Development Plan is that Tilden is an established, developed park and that little new development is appropriate. Rather than new development, protection of the natural environments of Tilden Park, with their remarkable diversity of wild plant and animal life, is considered of highest priority for the future. Eighty-seven percent of the Park lands are to be retained in a natural state. They have been, and will continue to be, a recreational and educational resource of great value to park visitors. As population growth and development increases in surrounding areas, the natural environment will be Tilden's greatest gift to the future, but these resources must be managed with great care if their values are to be retained. Therefore, this Plan represents a turning point in the long history of Tilden Park. Land stewardship will now assume an increasingly important, pivotal role in the Park's future. The Land Use-Development Plan, thus, gives special attention to the management of the natural resources of the Park -- soil, water, vegetation, and wildlife -- and to the improvement and operation of existing facilities.

The 1988 Tilden Land Use-Development Plan will direct the future use, resource preservation and development of Tilden Park for the next 20 years. The heart of the Plan is Chapter III, the Land Use-Development Plan (also referred to as the Plan or the LUDP). This chapter outlines a future Development Plan for Tilden Park and management policies concerning Tilden's vegetation, wildlife, water and other natural resources. Chapter V, the Environmental Impact Report, discusses the environmental impacts which could result from the Plan and suggests mitigation for possible significant impact and alternatives. The remaining sections of the report serve as background for these two major chapters.

The problem of a park, is the reconciliation of adequate beauty of nature in scenery, and holding it available to the use of those needing it.

- Frederick Law Olmsted



I. SUMMARY

A. Plan Concept

Throughout its 50 year history, Tilden Park has mirrored an intense public debate about balancing the preservation of parklands against the public use of these resources. In the "Preliminary Report upon the Proposed East Bay Regional Park District," Lawrence Merriam, a National Park Service planner, succinctly expressed the challenge still facing park users and planners today:

The fundamental motive in establishing this park is the preservation, as far as possible, of its inherent scenic values while skillfully adopting it to human use.

Long before Merriam's time many Americans had recognized the need to set aside natural places where growing numbers of city dwellers could sustain and nourish their connections with the natural world. In 1866 Frederick Law Olmsted Sr., whose efforts led to the founding of parks like Tilden across the country, saw a clear connection between social health and access to nature for the nation's growing urban population:

Make nature accessible to the millions imprisoned in the big cities. There is a necessity to strike a healthy balance between the natural world and the man-made world.

Fifty years later, on October 18, 1936, during the official ceremony opening the still to be completed park that would bear his name, Charles Tilden echoed Olmsted's insight:

The most precious thing in life is health. This park will bring people out of doors and make them healthy...the park will be made into as delightful an outdoor center as any in the country.

Yet, under the pressure of increased population and urbanization, the balance that early park designers sought "between the natural world and the man-made world" has become more problematic, more elusive but also more urgently needed.

Tilden was originally conceived of as a link in a chain of parks which now includes Redwood, Sibley and Temescal. These parks, along with Wildcat Canyon, form a nearly continuous greenbelt extending from Richmond to San Leandro. Tilden was to be the first link in this park system.



Figure 1
CHAIN OF PARKS - GREENBELT CONCEPT

In the 1940 Master Plan, Elbert Vail, the District's first General Manager, recognized "two different ideas" for guiding Tilden's development: "the idea that the park should be developed as a metropolitan city park...with roads, play-grounds, picnic areas, recreational fields, special camping areas, educational auxiliaries, etc.;" and "the idea that this scenic property...should be maintained as a naturalistic park...kept, as nearly as possible, in a naturalistic condition."

The "1964-69 Forward Plan," as its name implies, emphasized the development of park facilities over preserving natural resources and open spaces. Many of the facilities proposed in the "Forward Plan" were never carried out. What seemed like progress in 1964 now is regarded as a threat to an increasingly scarce natural resource. The 1988 Tilden Plan recognizes this historical debate and continues the quest for a sensible compromise among the legitimate needs of Tilden's various users.

This Plan seeks to retain and enhance both the natural and the recreational resources of the park. The growing population of park users needs recreational facilities as well as areas where, in the words of Olmsted, "they may stroll for an hour, seeing, hearing, and feeling nothing of the bustle and jar of the streets, where they shall...find the greatest possible contrast with the restraining and confining conditions of the town."

Where development furthers legitimate recreational needs, the Plan supports it with sympathetic control. Where preserving areas in their natural state or restoring them to a semblance of their original condition is feasible, the Plan supports this goal as well.

The following concepts guide the policies and required actions of this Plan:

Development/Open Space

Maintain an appropriate balance between developed and open space areas.

Draw back from development proposed in the "1964-69 Forward Plan."

Renovate and better utilize existing facilities with minimal development while maintaining current areas of open space.

Park Facilities

Prevent damage of the natural resources by overuse of the park.

Maintain current level of use.

Increase public enjoyment by improving facilities.

Mitigate the impacts of heavy use in some areas.



Circulation and Parking

Reduce the use of automobiles within the park and encourage pedestrian, bicycle, and equestrian use.

Improve the trail system within the park.

Provide adequate parking at facilities.

Resource Management

Preserve and enhance the vegetation, wildlife habitat, and visual and cultural features of the park.

Preserve the riparian vegetation along the creek watercourses and reestablish where desirable.

Protect areas of unique biotic and historical significance.

Maintain healthy plant communities and wildlife habitat.

Maintain and improve water quality.

Ameliorate landslide and erosion hazards.

Maintain the scenic quality of the park.

B. Land Use-Development Plan/Environmental Impact Report Summary

The following policies highlight the major features of the Land Use-Development Plan. A more detailed discussion of each policy can be found in Chapter III.

1. Land Use Zones

Recreation Unit:

Two hundred sixty nine acres, approximately 12 percent of the total parkland, are designated as "Recreation Unit." This includes all picnicking areas, the Environmental Education Center (EEC), the Little Farm, the Pony Ride, the Merry-Go-Round, the Lake Anza Beach

Complex, the Brazil Building, the Botanic Garden, the Golf Course, the Golden Gate Live Steamers and the Little Train. The 120 acre Golf Course constitutes the major portion of this unit.

Natural Unit:

Approximately 1,995 acres, or 88 per cent, of the parkland is designated as "Natural Unit." This unit includes the "Special Protection Units," "Field Research Units," and "Special Management Units." The Plan keeps the same acreage of "Natural Unit" that currently exists in the park.

Special Protection Units:

The Plan designates certain areas containing exceptional natural features, rare or endangered plant and animal species and their supporting ecosystems as "Special Protection Units." These areas include the habitat of the Alameda (striped racer) whipsnake and unique floral associations. This section of the Natural Resources Management Plan (NRMP) is to draw attention to the fact that they may require special procedures for the management, care and consideration, even though they don't meet the precise criteria required of a "Special Protection Unit."

Field Research Units:

The Plan designates one "Field Research Unit," an isolated eucalyptus grove just southeast of Wildcat Peak. The EBRPD Educational Use Advisory Committee recommended the designation for this area on October 13, 1984.

Special Management Units:

The Plan designates two areas as "Special Management Units": the Nature Area and the fuelbreak. The Nature Area is to be managed to benefit wildlife and the interpretive programs held there. The fuelbreak is to be managed to protect residences bordering the park from fire.

2. Resource Management

Wildfire Suppression:

The District will manage the fuelbreak along the western boundary of the park. Trees planted in groves along Wildcat Canyon Road will be added to screen park visitors from automobiles where feasible. Wildlife habitat will be created especially in the moist draws where riparian vegetation can be established. The fuelbreak will be maintained primarily as grassland with groves of trees planted where feasible to soften its visual impact.

Vegetation:

The Plan encourages a long-term conversion of existing eucalyptus groves to native forest in the Upper Berkeley Hills. The Upper San Pablo Ridge will be maintained in grass and brush through prescribed burning and other methods. The views from Vollmer Peak will be preserved by selectively removing eucalyptus and pine except where they serve to screen the existing communications towers. The existing landscape character of Sweet Briar, Laurel and Oak Canyons will be maintained. In all of these areas, unusual flora will be protected. Grasslands on south and southwest slopes will be maintained by suitable methods.

Wildlife:

The Plan will provide and protect habitat for the indigenous wildlife in Tilden Park. It includes determining the distribution of selected species and the establishment of a regular census program to monitor wildlife species which are indicators of a diverse ecosystem and to provide data concerning habitat management practices and needs. Rocky west facing slopes, habitat of the rare and endangered Alameda (striped racer) whipsnake, will be protected.

Water:

The Plan includes establishing a "riparian zone" to preserve and restore water resources in Tilden Park. In the "riparian zone" the District will restrict horse and foot traffic to reduce erosion and sedimentation and will limit the use of pesticides and fertilizers to prevent incidental pollution. Where feasible, riparian vegetation will be restored in the Botanic Garden and Golf Course to enhance wildlife habitat.

The District will monitor erosion to identify and control sources of sedimentation that may be contributing to stream and water course degradation.

Geology and Soils:

The District will identify and map soil erosion occurring along trails, roads and streambanks. Where possible, the District will redirect water and stabilize the embankments of gullies on active landslides. The District will incorporate erosion control plans into any capital improvement project which involves grading or other activities that expose soil.

3. Facilities and Circulation

Open Space and Visual Aspects:

Several strategies will be used to preserve the existing landscape character of the Park. These include protecting special view corridors and vista points from encroaching vegetation. Fencing will be

restricted. Native trees will be planted in the fuelbreak and at new parking areas to provide screening from automobiles.

Circulation and Parking:

To encourage pedestrian use of Tilden Park the Plan includes establishing the "Tilden Trail," a well-marked trail linking all the major facilities and open space in Tilden Park, and constructing and signing trail links to create loop trails and pedestrian thoroughfares in the Park. New parking areas will be located at facilities having insufficient parking (Lake Anza, Brazil Building, Botanic Garden, Little Train) to channel overflow roadside parking into formal parking areas. Roadway improvements at critical locations will improve traffic safety throughout Tilden Park. An equestrian staging area will be provided at the southeastern edge of the Park above the Corporation Yard.

Recreation and Interpretive Facilities:

Unique facilities in Tilden Park provide varied recreational opportunities for park visitors. To extend this public service the Plan includes increasing disabled access at all the major facilities. One new reserve group picnic area will be provided, and one family picnic area will be converted to group picnic use. New ponds for resource interpretation and wildlife habitat will be developed at the Tilden Nature Area. Facilities at Tilden Nature Area will be renovated, including the Little Farm, Group Camps and Environmental Education Center.

Service Facilities:

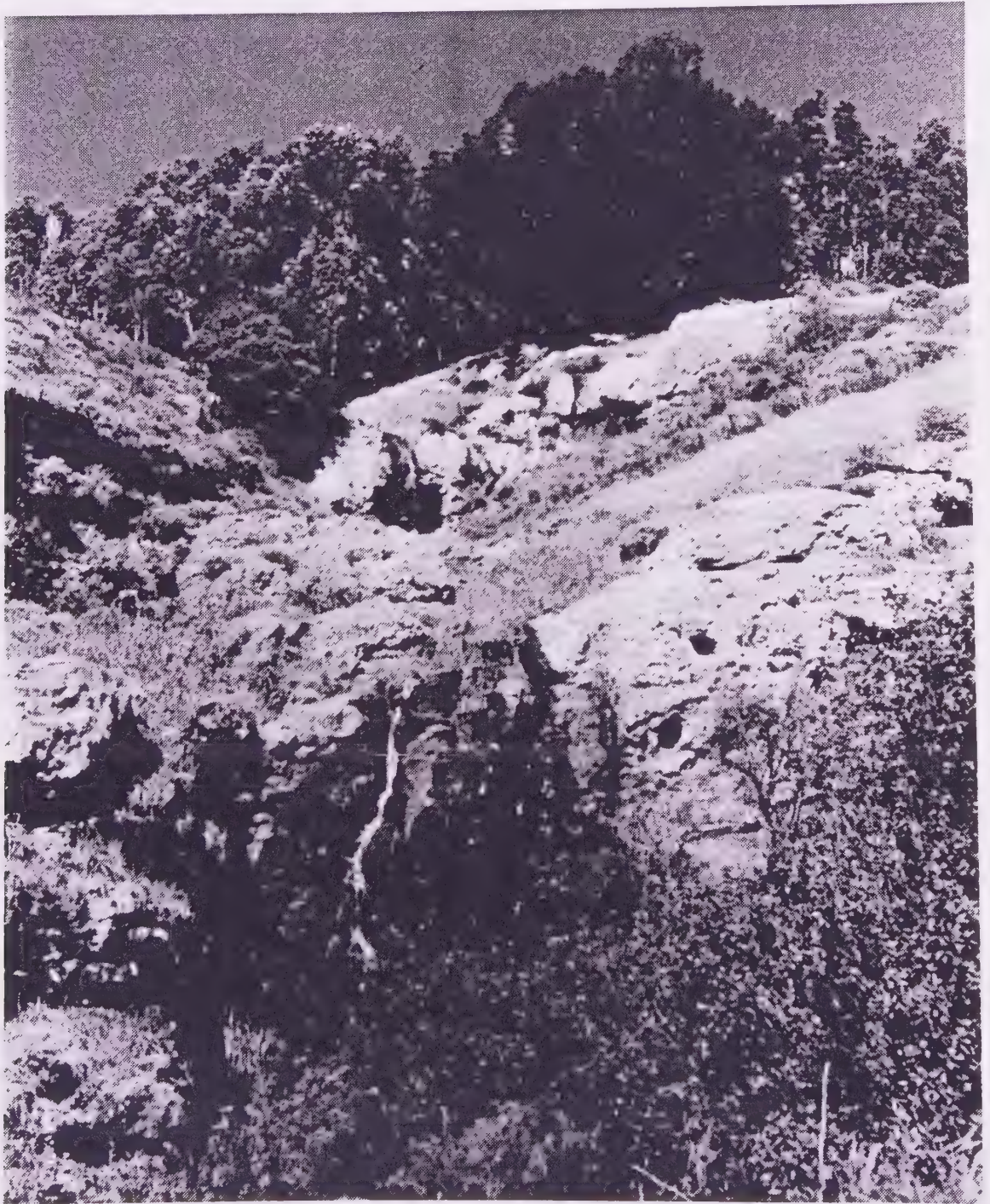
The District-wide Corporation Yard (Central Stores, mechanics, carpenters shops, roads and trails offices, and Fire Chief's office) will be relocated to a more centrally accessible site within the District. Facilities for operations staff will be retained; the remainder of the area will be reclaimed for open space.

4. Environmental Impact Report

The Environmental Impact Report (EIR) reviews the LUDP proposals for the development of new, and the expansion of existing, parking areas; the development of an equestrian staging area; the development of a new trail and new trail links; the development of four new ponds; the development of one new picnic facility; and the removal of the District-wide corporation yard.

The EIR also reviews the NRMP which outlines vegetation management practices (e.g., prescribed burning, brush crushing), erosion control practices and the establishment of indigenous plant associations.

The LUDP and NRMP were designed to avoid and/or mitigate adverse environmental impacts. The EIR outlines a variety of mitigation measures for erosion control, water quality maintenance and traffic safety which have been incorporated into the project. Aside from the no project alternative, no environmentally superior alternative was identified to the proposed project.



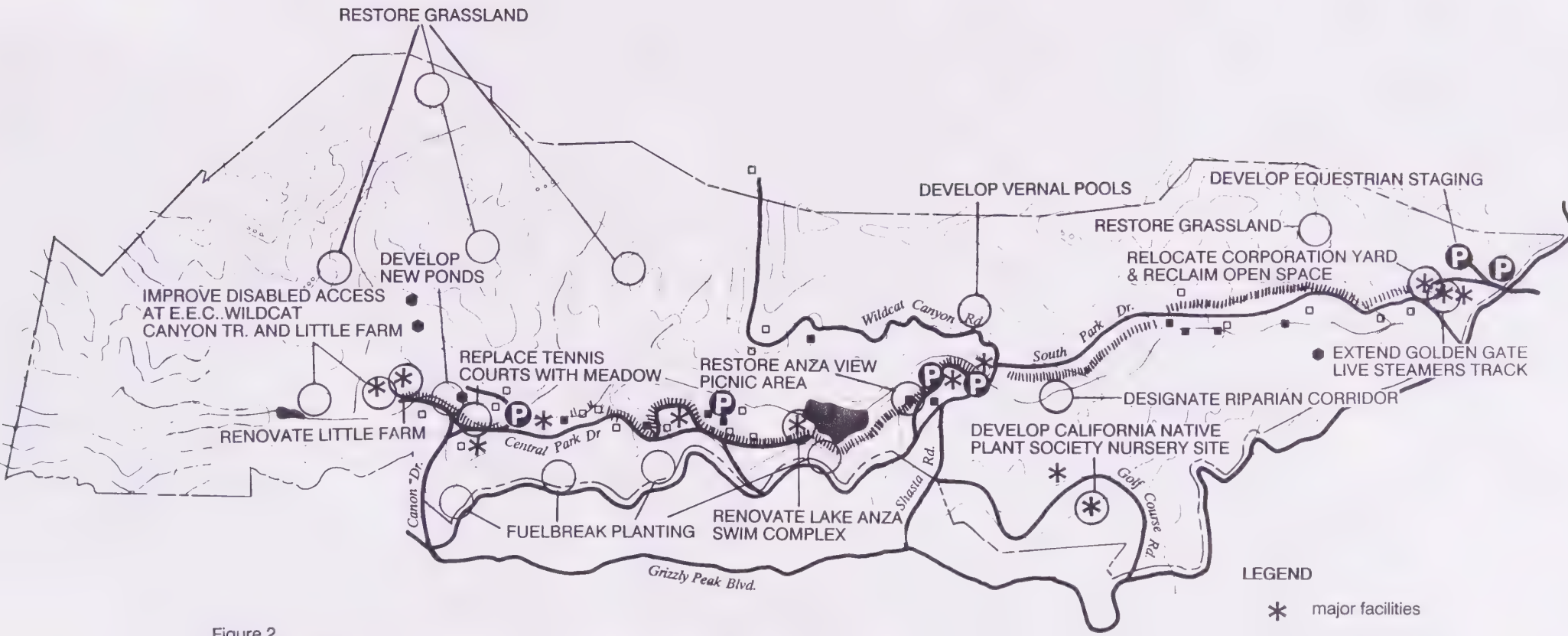
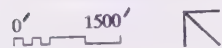


Figure 2

SUMMARY OF LAND USE - DEVELOPMENT PLAN



LEGEND

- * major facilities
- □ picnic areas
- group camp areas
- roads
- - - - - proposed tilden trail
- P proposed new & expanded parking areas
- location of major facility and resource proposals



II. BACKGROUND

A. Park Description and Location

Charles Lee Tilden Regional Park straddles the boundary between Alameda and Contra Costa counties in the hills above Berkeley. The Park contains 2,164 acres fitted into the narrow upper reaches of Wildcat Canyon. Tilden Park is bordered by the Berkeley Hills on the west and San Pablo Ridge to the east. In between, rolling grasslands, chaparral, lakes, forests, creeks and canyons create this diverse park landscape. Vollmer Peak rises from the valley floor to 1,913 feet, the highest point in the Berkeley Hills, at the southern end of the Park. Somewhat lower, the 1,250 foot Wildcat Peak juts out in the northern extremity. Both peaks are renowned for their fine views. On San Pablo Ridge one can hike through pungent groves of eucalyptus or tread through the duff of pines planted over 50 years ago. Outside the forests are expanses of grassland and brush splashed with wildflowers in the spring. Native oak/bay woodlands cloak the Berkeley Hills and follow the tributary creeks throughout Tilden Park. The rounded tree canopies formed by the massive limbs of the oaks, bays and buckeyes shelter the wildlife inhabiting Tilden Park.

Flowing through these native woodlands is Wildcat Creek, the heart of Tilden Park. The creek comes alive with great force during the rainy season, draining about 11 square miles of watershed into the San



Francisco Bay. In summer the creek dwindles into sporadic pools -- just large enough to keep the migratory steelhead trout alive. Two dams constructed on the mainstream of Wildcat Creek create Lake Anza and Jewel Lake. Lake Anza is a popular swimming facility which also supports a self-sustaining fishery. Smaller Jewel Lake is used primarily as a part of the Park's interpretive program.

Other attractions of Tilden Park include an 18 hole Golf Course, picnic and barbecue sites, playfields, day and overnight camp areas and the Brazil Building.

The Park also has an antique Merry-Go-Round, a Pony Ride, a miniature Steam Train, a Little Farm and an Environmental Education Center.



The 10 acre Botanic Garden displays California native flora. In addition, Tilden Park has an extensive trail network for hiking, equestrian and bicycle use.

One of the oldest and more developed parks of the East Bay Regional Park District, Tilden has had a varied history. Records show that in 1772 Captain Pedro Fages, accompanying Father Juan Crespi of Monterey, traveled through Wildcat Canyon and met the Costanoan Indians of the area.

Four years later, De Anza reached the interior of Wildcat Canyon. Herds of cattle from Mission Delores roamed over the hills. Later, Anglo settlers built a quarry, a dairy and a slaughterhouse.

Civilian Conservation Corps crews of the Depression era produced much of the fine stonework throughout Tilden Park contributing to the Park's character.

These crews built many of the roads, buildings and trails, as well

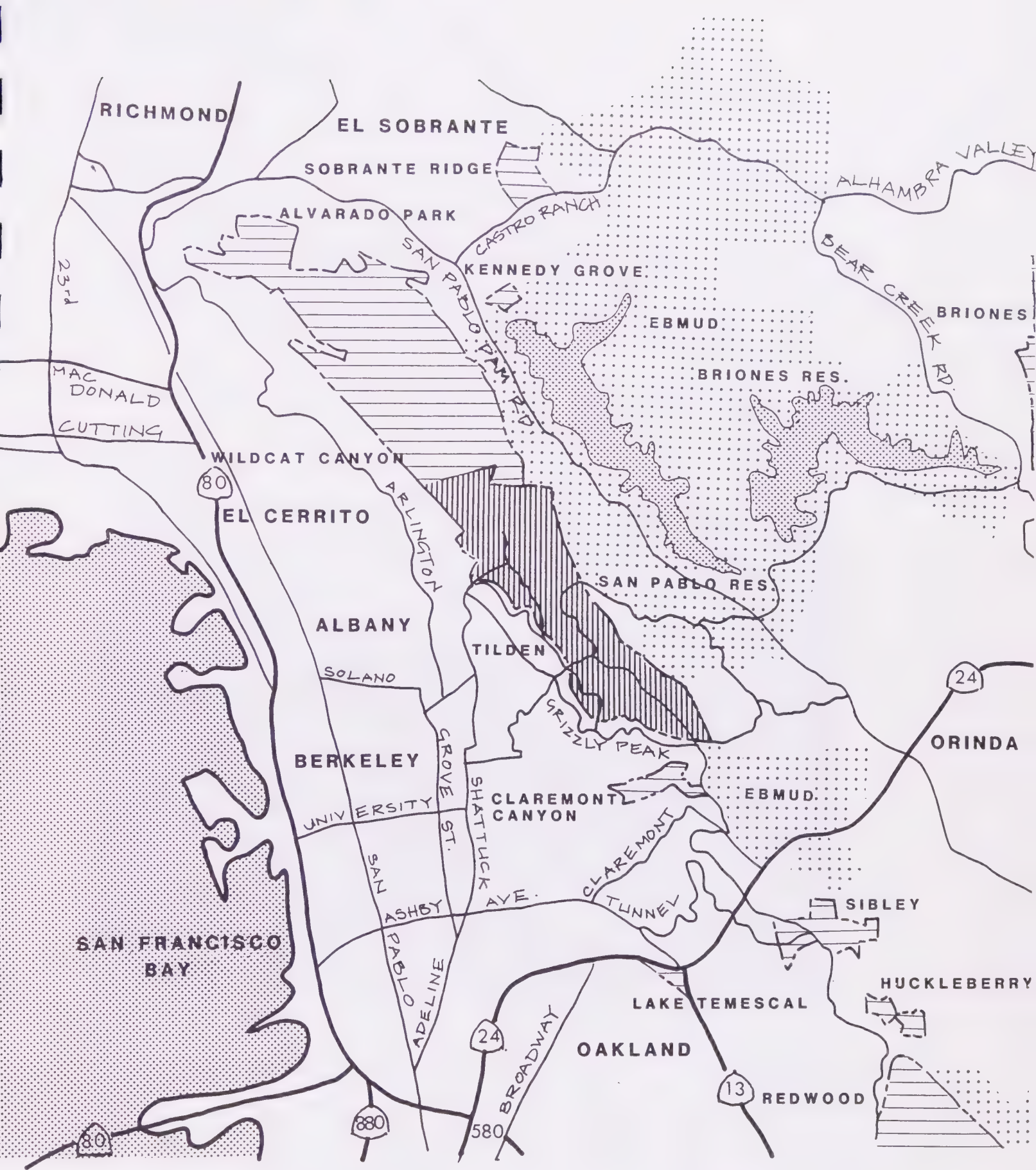


Figure 3

LOCATION MAP



LEGEND



Tilden Regional Park



other E.B.R.P.D. lands



other agencies' lands

as the Golf Course. During the Second World War, over 2,000 soldiers were stationed in Tilden, which also housed a prisoner-of-war stockade for 200.

For over 50 years different cultures, events and attractions have occupied Tilden Park. Tilden will continue to provide diverse sources of recreation for future generations, especially for those who live in cities and search for ties to landscapes that make them feel alive and free.



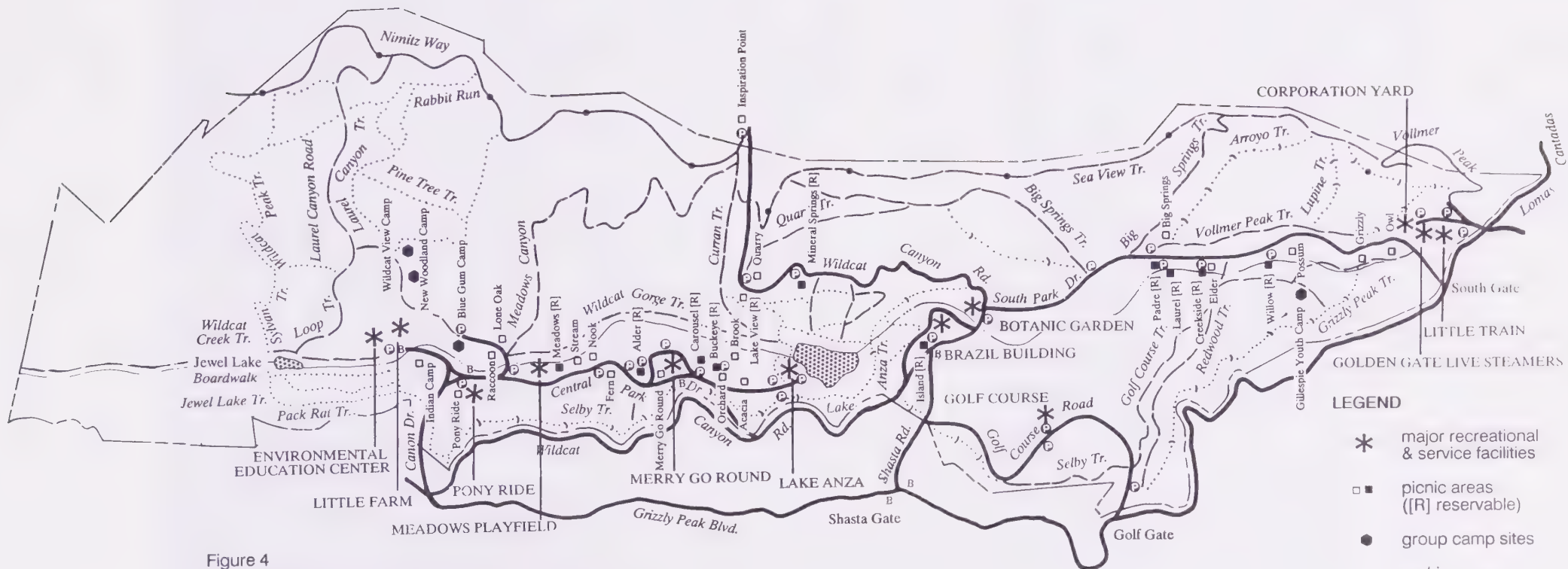


Figure 4

EXISTING FACILITIES



LEGEND

- * major recreational & service facilities
- picnic areas ([R] reservable)
- group camp sites
- ⊙ parking areas
- B bus stops
- roads
- paved trails
- multi-use trails
- ... hiking & equestrian trails
- ... hiking trails

B. Regional and Local Agency Plans

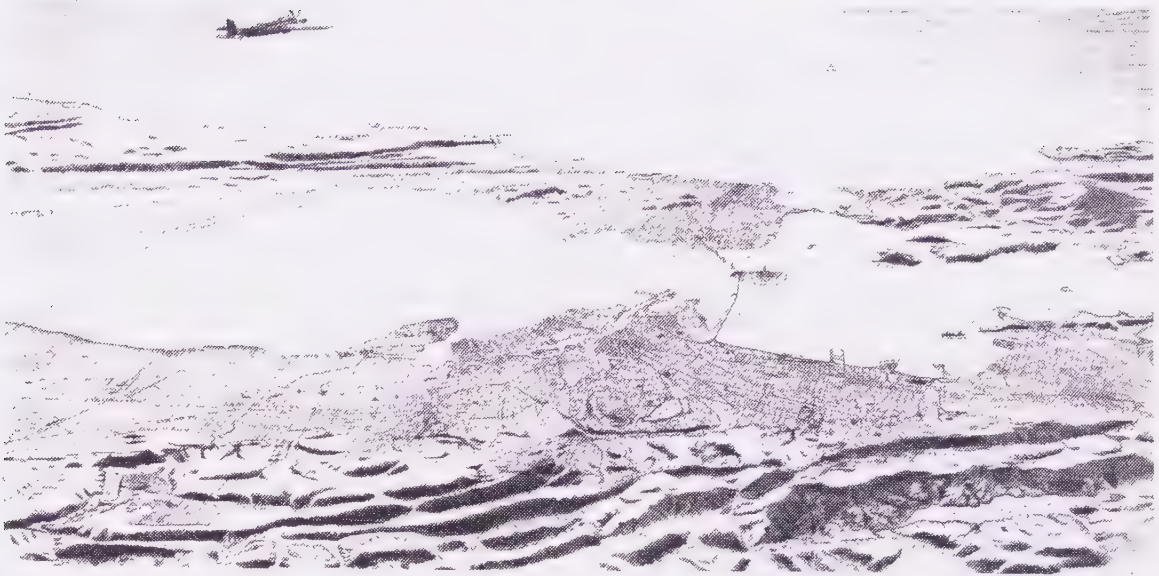
Tilden Park is recognized as a regional recreational and open space resource by the county, surrounding cities and other regional agencies. A discussion of other regional and local agencies that have included Tilden in their plans follows.

The "Recreation Element" of "The General Plan for Contra Costa County, 1970," states, "a major, well developed and highly used park of 2,046 acres, Tilden is frequently thought of as a Berkeley, rather than a Contra Costa County park. However, the exploration of its many attractions, both natural and man-made, offers a new dimension to the residents of Contra Costa County."

"The Association of Bay Area Governments' (ABAG) Regional Open Space Plan phase II, 1972," shows Tilden as publicly owned permanent open space for outdoor recreation and preservation of natural and human resources.

In "The City of Berkeley Master Plan," adopted in 1977, the "Open Space, Conservation and Recreation Element" states, "Although Tilden is not within the city limits, the Plan describes the park as part of the 'Bay Region System' and a park which many Berkeleyans use."





C. Adjacent Land Use

Tilden is a link in the system of parks that binds together the open lands of the East Bay. Tilden Park is adjacent to Berkeley, El Cerrito and Richmond on the west and to open space lands on the east. A discussion of adjacent uses, plans and potential impacts on the Park follows. (See Figure 5 for the location of the numbered areas.)

- 1) Wildcat Canyon Regional Park, also within the EBRPD. Primarily an open space.
- 2) Watershed land owned by East Bay Municipal Utility District (EBMUD) which is maintained as permanent open space with restricted access. Certain trails are open by permit.
- 3) Private agricultural land in the unincorporated area of Contra Costa County. Future development proposals may present visual and other conflicts with park uses.
- 4) Publicly owned watershed and ecological reserve lands owned by EBMUD and the University of California. No development is anticipated.
- 5) Private residential development in the cities of Berkeley and the unincorporated Kensington District. Some of the homes are visible from various areas in the Park. The fuelbreak within the parkland bordering these homes is maintained for fire protection.

D. Regional Recreational Inventory

The Regional Recreational Inventory reviews the population, location and distribution of potential visitors to Tilden Park. The following inventory includes a list of recreational opportunities similar to those sought in Tilden Park. It also assesses the needs of park visitors in California as described in various studies as well as the issues particular to Tilden Park as presented by members of the public at public hearings.

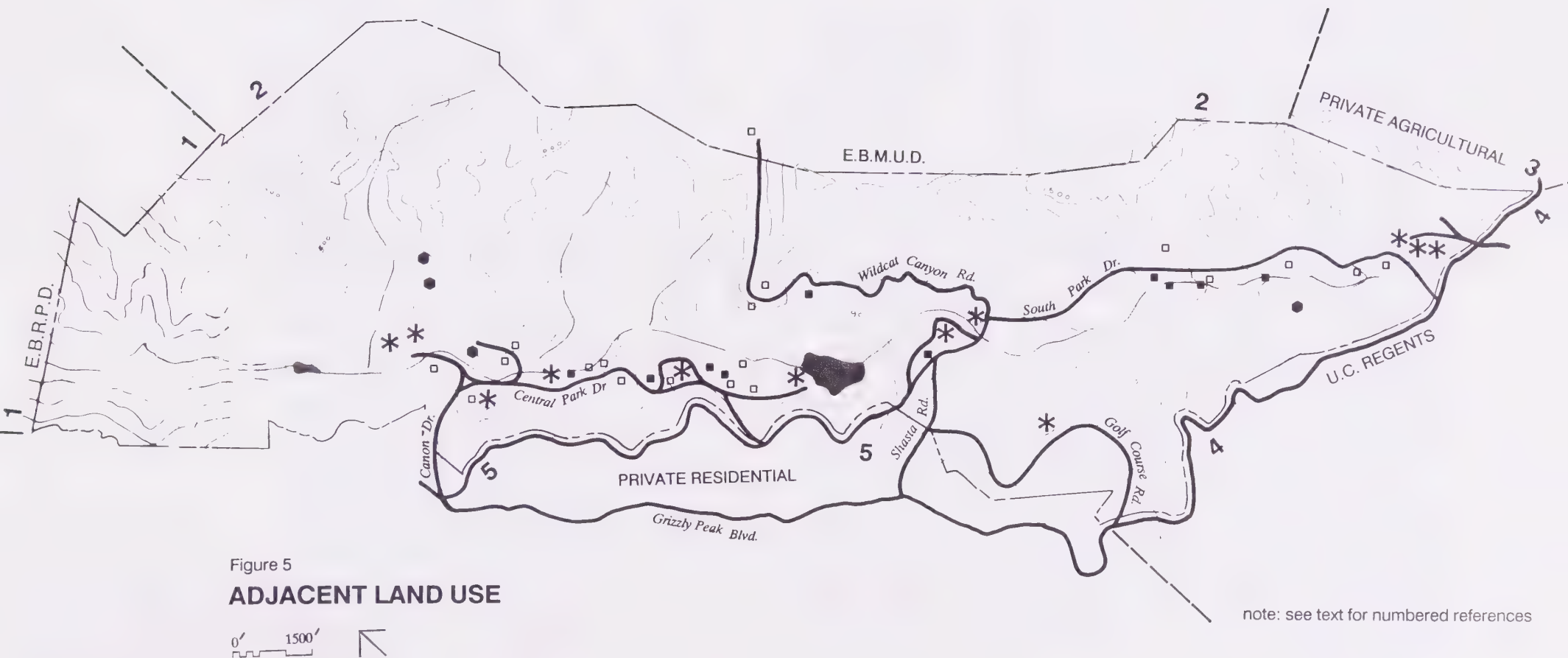
During the preparation of this Plan, a major dichotomy of interest soon became apparent between those people who know the Park well and those who do not and who, therefore, addressed the more generalized regional recreation needs discussed in this chapter.

The Park's neighbors feel that Tilden Park is "over-developed" and has too many visitors. These people have a very special and intimate feeling about the Park; many of them use it frequently, and many of them are neighbors overlooking the Park. In a sense, Tilden Park is not a regional park to them but a local neighborhood park.



A greater number of people is concentrated near Tilden Park than near any other park in the District. Almost 1.6 million people live within a half-hour travel time of Tilden Park. Tilden is thus not only the most heavily used park by District residents but it also attracts thousands of outside visitors each year.

Richmond, Oakland, Albany, Kensington and Berkeley school district students regularly visit the Environmental Education Center. Companies, workers, families, and other groups regularly organize annual reunions and other festivities at the reserve group picnic areas in the Park. Regional athletic events are staged in the Park and the youth camps offer a respite to children all over the East Bay from a summer in the



city. Other unique facilities such as the Merry-Go-Round, Little Train, Botanic Garden and Pony Ride attract visitors from all around the Bay Area. To many people in the Bay Area, Tilden Park is the first park thought of when considering the East Bay Regional Park District.

For many reasons, historic and otherwise, Tilden will remain a heavily used park within our system. The District has, and will continue, to publicize the other parks in the system in order to disperse this use to other parks. Yet the regional demand for Tilden needs to be recognized and dealt with.

1. Recreational Needs in California

The State of California Department of Parks and Recreation published a recreation study titled "Recreation Needs in California, February, 1982" and revised March, 1983, which analyzed the recreational needs of California's urban residents. Recreational case studies of the special populations -- Black, Hispanic, Filipino, disabled, elderly, low-income and autoless -- were included in the study because of the lower-than-average recreation participation levels found in 1980.

In analyzing recreational trends in California, the report found that "the largest increases in participation are expected in non-strenuous outdoor activities," e.g., picnicking, camping, boating, hiking, nature study and swimming. This finding indicates a need for parks that provide sufficient areas of open space to accommodate these outdoor activities.

In summary, the primary recreational needs of Californians are:

- safe, secure recreation areas,

- recreation areas and programs that increase opportunities for social interaction,

- recreation opportunities that do not require lengthy travel time,

- recreation programs that accommodate non-traditional leisure schedules,

- nature-oriented parks in and near metropolitan areas,

- new local parks in growing communities where deficiencies exist,

- citizen involvement in local park planning, and,

- incentives to promote private sector provision of nature-oriented facilities and programs.

2. 30-Minute Planning Zone and Population

The District Master Plan designates a planning zone to serve population living within 30 minutes driving time of a parkland. Within this zone, special attention is to be devoted to the population of the zone, the supply of regional recreational facilities and the potential demand for park and recreational use. This information is necessary in establishing park access and user programs. Figure 6 shows the 30-minute planning zone.

The figures in Table 1 indicate that Tilden Regional Park is easily accessible to over 1,500,000 East Bay residents:

TABLE 1

30-MINUTE PLANNING ZONE POPULATION

<u>Alameda County</u>		<u>Contra Costa County</u>	
Alameda	75,232	El Cerrito	23,418
Albany	15,216	Lafayette	22,691
Berkeley	107,202	Martinez	27,458
Emeryville	4,652	Moraga	15,422
Oakland	354,197	Pinole	15,096
Piedmont	10,455	Pleasant Hill	29,359
San Leandro	66,017	Richmond	78,606
		San Pablo	21,355
		Walnut Creek	60,187

Total Zone Population -- Incorporated Areas Only: 1,582,940

(Source: Population Research Unit, Department of Finance,
State of California, 1986)

Tilden Park has high repeat visitation. In 1976 the Tyler Research Association published a study of the EBRPD which found that, out of 732 people interviewed at 9 EBRPD parks, 40 percent of the respondents said they had visited Tilden. This topped the list as the most visited park of those who were interviewed.

Over the forecast period 1985-2005, the Association of Bay Area Governments (ABAG) indicate that the population of the 9 county Bay Area will increase by 1,000,000 people. Contra Costa County's population will grow an additional 26 percent above the current level of 724,035. Alameda County will increase its population during the next 20 years an additional 19 percent. Together these two counties will increase their population over 400,000 persons.

Area of Influence Policy

The District will plan and develop a parkland system designed specifically to meet the needs and demands of the District residents. A Planning zone based generally on a 30-minute travel time shall be recognized as the source of the principal users and potential users of a parkland.

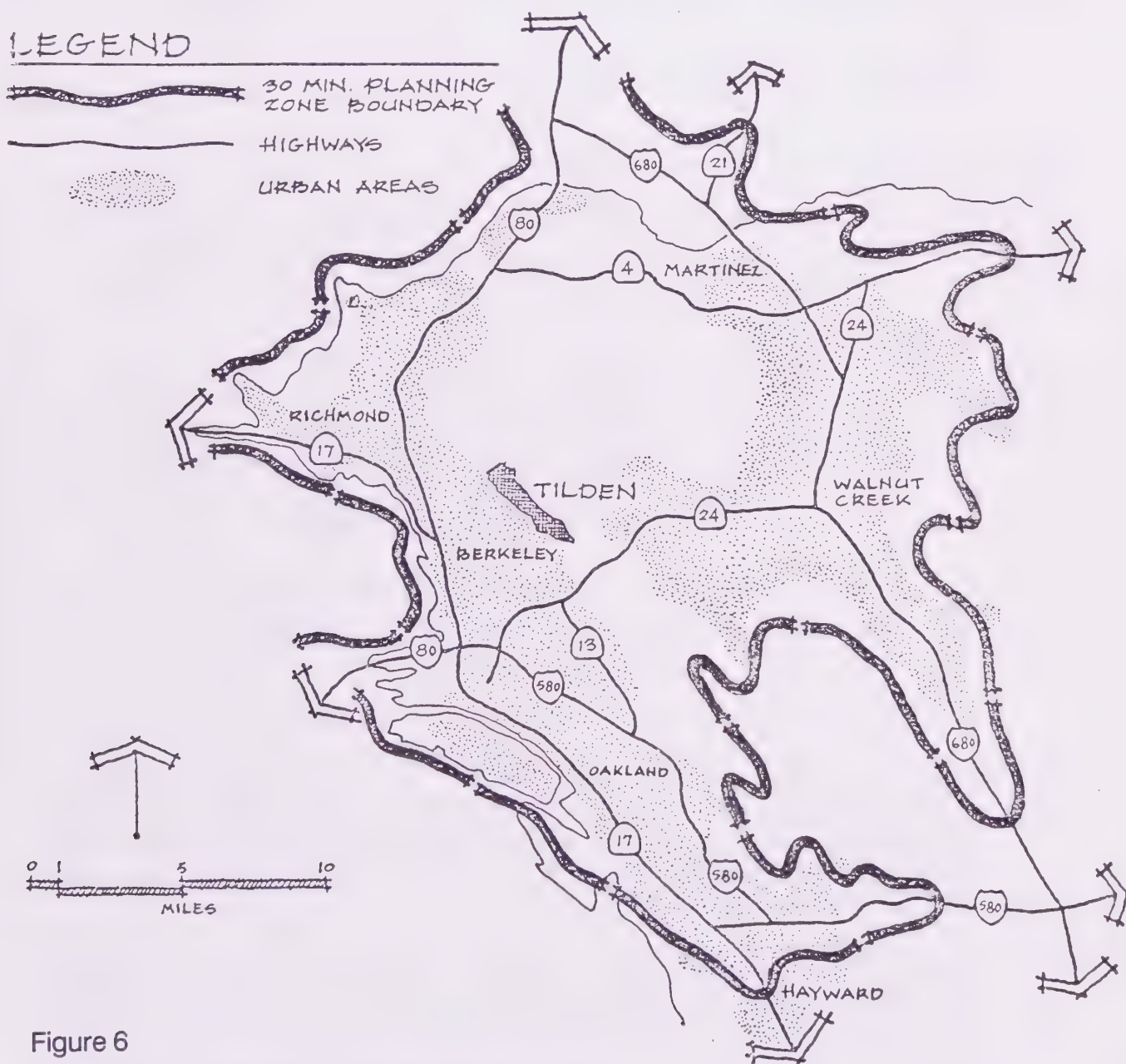


Figure 6

30 - MINUTE PLANNING ZONE

The fastest growing areas of Alameda and Contra Costa counties lie outside of the Tilden 30-minute planning zone. The areas inside the planning zone are already dense population centers whose population increases will be limited to infill development. Consequently, the percentage of increase in the planning zone will be lower than the expected 26 percent in Contra Costa County and the 19 percent in Alameda County.

Projected population figures suggest several possible consequences for Tilden Park: higher user density, crowds at high use facilities and greater competition for reserve picnic sites and youth camp overnights.

3. Recreation Supply District-Wide and in the 30-Minute Planning Zone

Tilden Park offers a variety of regional recreational opportunities including bicycling, picnicking, hiking, horseback riding, jogging, camping, swimming and golfing. In addition, there are several unique attractions: the Merry-Go-Round, Little Train, Pony Rides, Little Farm, Botanic Garden, children's play areas and the Environmental Education Center. Similar recreational activities in the 30-minute planning zone provided by EBRPD and other agencies are listed below.

Briones Regional Park: hiking, riding, picnicking, jogging, nature study, archery range, children's play areas.

Kennedy Grove Regional Recreation Area: hiking, riding, group picnicking, turf area, day camping.

Sibley Volcanic Regional Preserve Area: hiking, nature study, riding.

Huckleberry Botanic Preserve: hiking and nature study.

Wildcat Canyon: hiking, riding, picnicking, nature study, bicycling.

Temescal Regional Recreation Area: swimming, hiking, nature study, jogging, group picnicking, children's play area, fishing.

Redwood Regional Park: family and reservable group picnicking, hiking/equestrian trails, jogging, Hunt Field (a show horse jumping field).

Those areas offering shoreline related activities include:

R.W. Crown Memorial Beach: swimming, fishing, youth group day camping, windsurfing, nature programs, hiking, jogging, sunbathing, turf area.

Point Isabel Regional Shoreline: fishing, bicycling, picnicking, turf area.

San Leandro Bay Regional Shoreline: nature study, hiking, bicycling, fishing, family and group picnicking, turf area.

Point Pinole Regional Shoreline: hiking, bicycling, fishing, picnicking.

Brooks Island Regional Preserve: scientific and passive nature study, restricted access.

Miller/Knox Regional Shoreline: picnicking, hiking, jogging, nature study.

Other regional recreational opportunities are provided within the 30-minute planning zone by the East Bay Municipal Utility District. Lafayette Reservoir and San Pablo Reservoir both have a lake with marina and boat rentals, fishing, bike and jogging/hiking trails and picnicking. There are also trails available for hikers and equestrians use on a permit basis. Siesta Valley is open by permit to school and research groups for nature education.

Public golfing is provided at: Alameda Municipal Golf Course, Marina Golf Course (San Leandro), Lake Chabot Municipal Golf Course (Oakland) and Diamond Park.

Some city parks offer family and group picnicking facilities. These are not considered regional facilities, however, and are not listed. One exception is the 513 acre Joaquin Miller Park, owned and operated by the City of Oakland, which is adjacent to EBRPD's Redwood Regional Park. Joaquin Miller Park has hiking/equestrian trails, an outdoor theater, group camps and picnicking areas. Boating and fishing are available at Lake Merritt, Estuary Park (Oakland) and Marina Park (San Leandro).

The University of California, Berkeley, manages open space lands adjacent to Tilden Park's southeast boundary. There are hiking trails and ecological study areas available on these lands.

4. Public Suggestion

Scoping Session:

Public meetings are the major forum for District residents to express their desires concerning the future use of a parkland. Two hearings were held to receive public suggestions: a Scoping Session on May 27, 1986, at the Brazil Building, and a Resource Analysis hearing on August 21, 1986, at Martin Luther King Junior High School in Berkeley. Additionally, 16 informal meetings were held with interested parties including neighborhood groups, conservation groups, native plant enthusiasts, equestrians, hikers and persons with disabilities.

The comments received at these meetings were used by staff to identify issues and to shape policy decisions and required actions. Many of the comments at the public Scoping Session centered on the Berkeley Shakespeare Festival (BSF) application for an amphitheater to be located within Tilden Park. The BSF application was subsequently withdrawn and BSF has leased a site from East Bay Municipal Utility District at nearby Siesta Valley. The California Native Plant Society (CNPS) had also applied for a site to be used as a permanent growing ground. Participants voiced concern or support at this hearing in response to these two proposals. However, many other issues were raised at both public hearings through spoken and written comments, letters and telephone conversations. Other public comments focused on providing safe access to Tilden Park for automobiles, pedestrians, persons with disabilities and equestrians. Also of major concern to many participants was the preservation of open space, wildlife habitats and, in particular, Wildcat Creek.





III. LAND USE-DEVELOPMENT PLAN

This Plan seeks to retain and enhance both the natural and recreational resources of Tilden Park. The growing population of park users need recreational facilities as well as areas of open space to provide relief from urban life.

The maximum level of development proposed in the "Forward 1964-69 Plan" was never carried out. Among the facilities never constructed are an interpretive amphitheater, milk house, smoke house, milk bar and 9 hole golf course. The 1964-69 Plan was drawn in a more development-oriented era and today the values of natural resource and open space preservation and associated types of recreation (hiking and picnicking) have assumed greater importance, particularly near urban centers. With this recreational outlook, the current development level of Tilden Regional Park seems appropriate and the need for many of the facilities mentioned above no longer seems necessary.

The present character of the Park will be retained along with most existing facilities. The unbuilt facilities proposed in 1964 are not included in this Plan.

The emphasis of this Plan is the professional management of natural resources of Tilden to ensure their perpetuity and the renovation of existing facilities, the provision of additional disabled access to facilities, improvements to the trail system to strengthen pedestrian use, and increasing parking capacity at heavily used facilities. One reserve group picnic area will be restored to its former location at Anza View. An equestrian staging area will be developed near Vollmer Peak trailhead above the Corporation Yard.

Special Protection Units have been so designated to protect unique natural features found within them. Other resource protection measures include reestablishment of the Wildcat Creek riparian corridor.

The following section describes the land use of Tilden in general terms leaving detailed recommendations concerning resource management and existing and proposed facilities to other sections of the Plan. As prescribed in the 1988 East Bay Regional Park District Master Plan, a Regional Park is to be divided into two zones designated "Natural Units" and "Recreation and Staging Units" for planning and management purposes. The Natural Units may be further divided into Special Protection Units, Field Research Units and Special Management Units. These designations are shown in Figure 7. The following principles were used to establish zone designations in Tilden Park:

- maintain the present balance between developed area and open space area with 12 percent designated as recreational units and 88 percent designated as natural units
- protect rare and endangered plants and animals and designate certain areas having special resource values

- designate areas for their exceptional educational value
- outline areas which require special management
- offer recreational opportunities to the public

A. Land Use Zones

1. Recreation Unit

The Master Plan policy states that the "Recreation and Staging Unit" should contain all the Park's recreational development and staging facilities. Such facilities include group and family picnic areas, concessions, outdoor education and interpretive facilities, equestrian facilities, beaches, bath houses, turfed meadows and other outdoor recreational facilities. The Master Plan also states that all improvements should be designed, landscaped and managed to harmonize with the surrounding natural landscape. (See Appendix D.)

Development in Tilden has historically occurred along Wildcat Creek. Facilities were developed along side existing roadways, particularly along Central Park Drive, Wildcat Canyon Road, and South Park Drive.

Two hundred sixty nine total acres, or 12 percent of the total Park, are designated as "Recreation Unit." This includes all picnicking areas, the Environmental Education Center, the Little Farm, the Pony Ride, the Merry-Go-Round, Lake Anza beach complex, the Brazil Building, the Botanic Garden, the Golf Course, the Golden Gate Live Steamers and the Little Train. The Golf Course constitutes the major portion of this unit, with 120 acres.

2. Natural Unit

Approximately 1,995 acres, or 88 percent of the Park, is designated as "Natural Unit." This area contains a variety of wildlife habitats and scenic areas. The Plan includes management of the same acreage of "Natural Unit" that currently exists in the Park. It also establishes a 50 to 100 foot wide riparian corridor along Wildcat Creek where feasible. This will be included in the "Natural Unit." The "Natural Unit" includes the "Special Protection Unit," "Field Research Unit" (formerly called "Educational Use Unit"), and "Special Management Unit." The purpose of these designations is to assure the protection of natural features within a significant portion of a regional park. The primary management objective is to allow activities compatible with the natural environment while preserving or restoring scenic, near-natural landscape conditions. Facilities development is limited to those necessary to accommodate activities such as camping, hiking and horse back riding. Forest and land management techniques such as tree cutting, prescribed burning, afforestation and planting programs using indigenous plant materials and livestock grazing may be used to maintain or recreate the desired environmental setting. (See Appendix D.) The boundaries of the

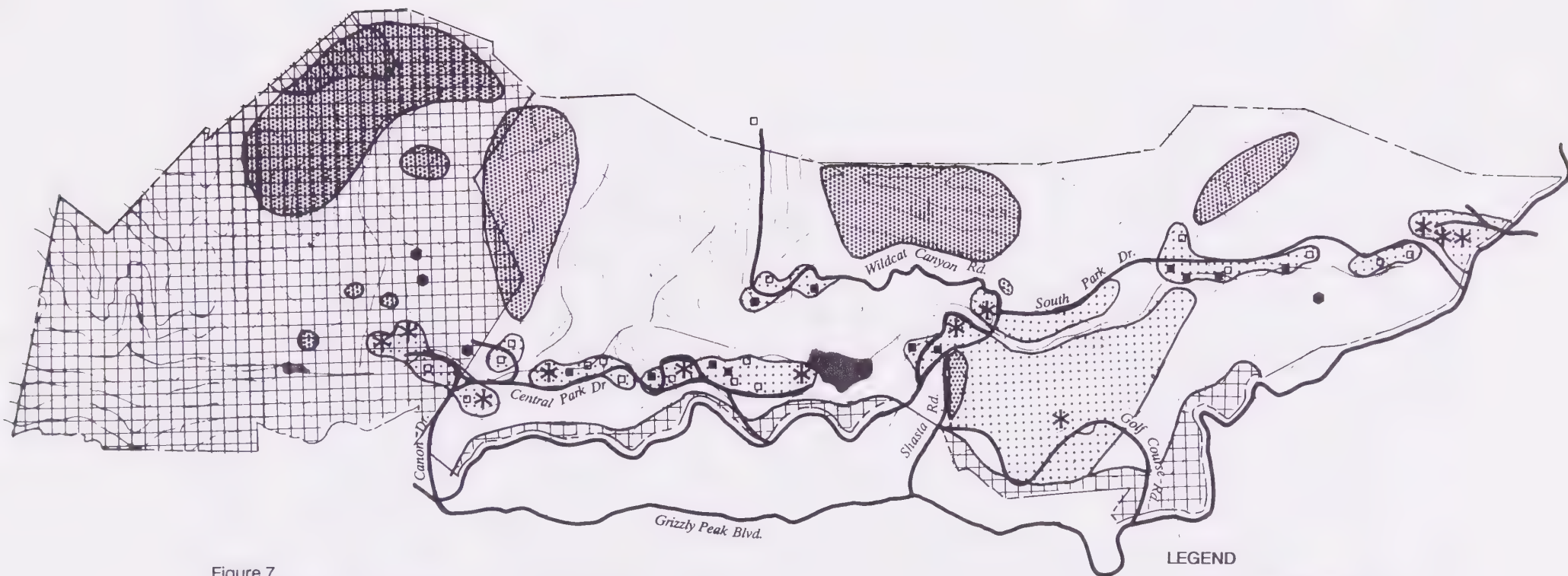
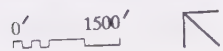







Figure 7

LAND USE ZONES



LEGEND

-  field research unit
-  special management unit
-  natural unit
-  special protection unit
-  recreation unit

Special Protection and Field Research Units shown in Figure 7 may be modified as new information on plant and animal distribution and research use are obtained.

3. Special Protection Unit

There are areas within the parkland which contain outstanding natural features, rare or endangered plant and animal species and their supporting ecosystems. The Plan designates these areas as "Special Protection Units" with the primary objective being the preservation and enhancement of significant resources. The Master Plan requires that activity within the "Special Protection Unit" shall be held to the minimum required for public safety and protection and enhancement of the resource. (See Appendix F.) For further discussion of the Special Protection Unit see Chapter III.B.1.b.

4. Field Research Unit

Field Research Units are designated throughout the District upon the advice of the Field Research Advisory Committee. These units are so designated based on their suitability for long-term management appropriate for continuing their geological and bioecological research value to professional and amateur researchers. Use in these areas is subject to restrictions. (See Appendix D.) One such area has been designated in Tilden Park. This unit is a eucalyptus grove just southeast of Wildcat Peak, designated as such on October 3, 1984. The rationale for its establishment is its isolated location along a ridge covered primarily with grass and some brush. The grove has been noted for its abundant wildlife.

5. Special Management Unit

The Plan designated two areas as "Special Management Units:" the Nature Area and the fuelbreak. Tilden Nature Area must be managed in order to benefit the interpretive programs which are held there. For further details regarding the Nature Area see Chapter III.C.4.1. The fuelbreak must be managed for fire protection of the bordering residences of the Park. For further details regarding the fuelbreak see Chapter III.B.1.a.

B. Natural Resources Management Plan

Tilden Regional Park is situated in the upper reaches of the Wildcat Creek watershed extending from the ridgeline of San Pablo Ridge on the east to the Berkeley Hills on the west. The watershed is a relatively narrow and steep canyon that drains the parkland from southeast to northwest.

The landscape of Tilden has been greatly affected by human activity. In large areas of the Park, landscape plantings and forest plantations have replaced native plant species. Other landscape alterations both within

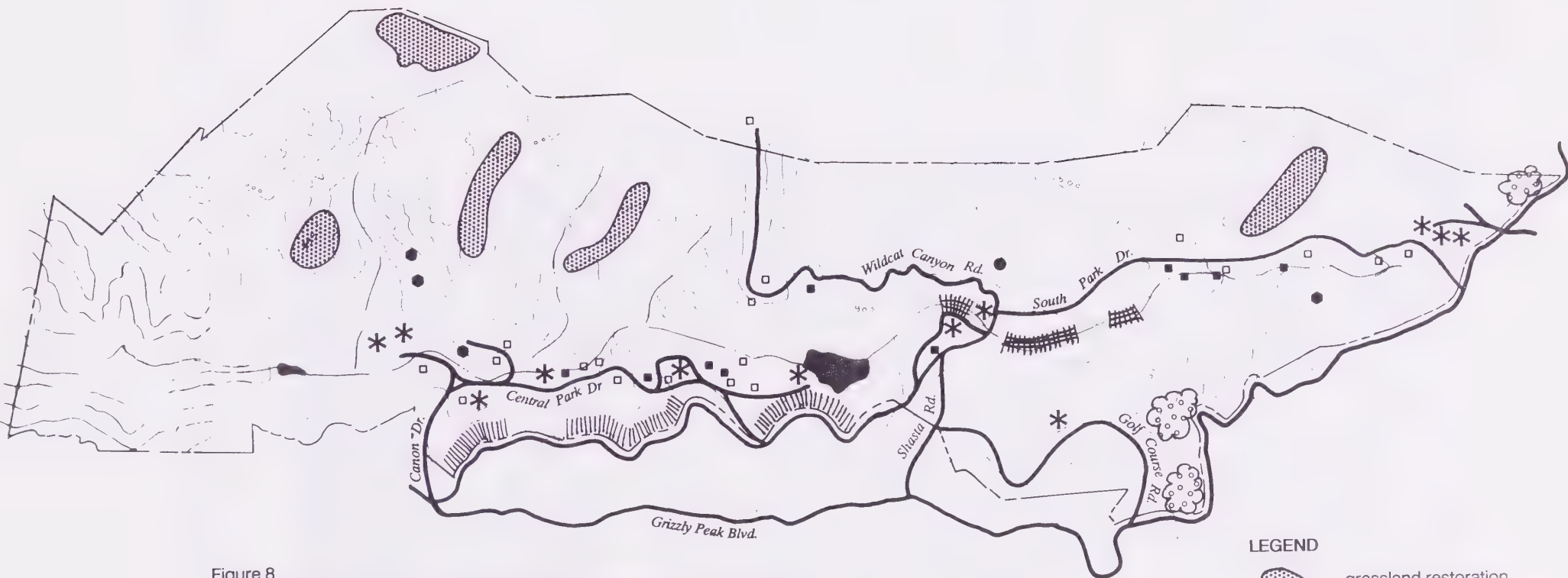







Figure 8

NATURAL RESOURCES MANAGEMENT PLAN

0' 1500'



LEGEND

-  grassland restoration
-  develop vernal pools
-  riparian zone
-  fuelbreak planting
-  eucalyptus conversion

and outside of the Park have resulted in increased erosion, activation of landslides, fire hazards and pollutant loading of streams. Increasing human pressures on wildlife within and adjacent to Tilden challenge the skills of park management. Because of the complex interrelationships between plants, animals and the physical environment the Natural Resources Management Plan includes policies to manage scientifically the various natural resources of the Park including wildlife and wildlife habitat. This also includes maintenance of native plant communities, wildfire suppression, maintenance of wildlife habitat, water quality maintenance and amelioration of landslide and erosion hazards. (See Figure 8.)

1. Vegetation

a. General

The vegetation of Tilden Regional Park is extremely complex, providing a variety of habitats. Habitat management and landscape maintenance require different management strategies. In general, it is the District's policy to favor indigenous species. Indigenous species are defined as plants occurring naturally on similar sites on the major topographic feature being considered. Similar sites would be all east-facing drainages, etc. Examples of major topographic features would be San Pablo Ridge, the Berkeley Hills, etc. This is in contrast to site natives, defined as plants which naturally occur, have occurred or might be expected to have occurred on a specific site (EBRPD, 1978, p. 7-8). Indigenous plants, having evolved as part of the local environment, are generally better adapted to local conditions and therefore require a lower maintenance level than non-indigenous plants. In some circumstances, it is not possible to maintain or permit certain environmental conditions, notably fire, that are necessary to maintain indigenous species. In such cases, a succession of other species occurs.



Even before its acquisition as parkland in 1936, Tilden Park was subject to non-indigenous plantings by former land owners. This continued after acquisition, both as afforestation and for specific landscaping purposes. During Tilden's 50 years under District ownership, land uses both within and adjacent to the Park have changed dramatically. Therefore, management practices which acknowledge these changes are required.

In view of these conditions, the Vegetation Management Plan for Tilden has been divided into 7 major areas as shown in Figure 9, each of which is generally uniform in the characteristics which govern

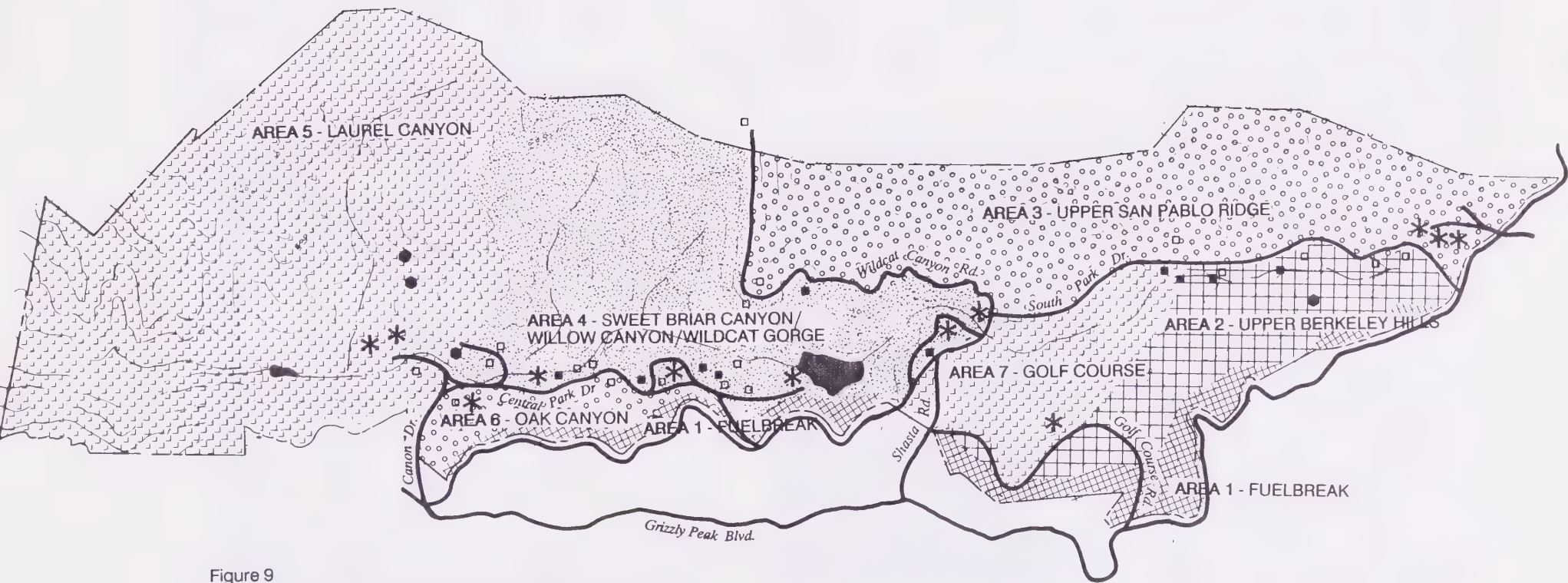


Figure 9

VEGETATION MANAGEMENT AREAS

0' 1500'



management practices. The areas have been divided on the basis of aspect (facing direction of the slope), established plant associations and the proximity to development. Specific practices are prescribed for each management block. In areas where fire represents a serious risk, management is directed towards a vegetation which is of low flammability and/or low fuel volume. In areas where native vegetation is well established or is becoming well established, practices which protect or promote that vegetation are recommended provided the work effort required is relatively modest. In areas where non-indigenous species are dominant, practices which maintain the status quo and prevent expansion of the non-indigenous types are identified. Where conversion from non-indigenous to indigenous vegetation is feasible within a reasonable effort, conversion, or action towards conversion, is recommended.



Area 1 - Fuelbreak

Background:

This area of approximately 150 acres was established in 1973 as part of the emergency work necessitated by the 1972 freeze. An essentially continuous fuelbreak was constructed through primarily freeze-damaged eucalyptus forests from Oak Canyon in Tilden Park south to Redwood Peak

in Redwood Regional Park, a distance of approximately 10 miles. In Tilden, the fuelbreak was constructed on the ridgeline where possible and on the property boundary elsewhere.

Since the fuelbreak's establishment, the District has undertaken steps to retard the reestablishment of eucalyptus and to retain an open aspect to the area through periodic clearing and prescribed burning. These activities were prescribed in a comprehensive report adopted by the District's Board of Directors (EBRPD, 1982). This report, known as the "Blue Ribbon Report," made a variety of recommendations for private landowners and landowning agencies. An operational document outlining detailed maintenance practices to be implemented in specific areas of the fuelbreak is currently in draft form. The following management strategies will guide maintenance operations until such time as this report is adopted.

Although the fuelbreak serves its intended fire control purposes, its construction dramatically reduced the natural screening provided by its former vegetation between the park and adjacent residential areas. Fuelbreak management requires maintaining the fire control value while restoring (at least partially) the landscape value previously provided.

Policy:

Provide a relatively open (i.e., grassy or sparsely wooded) area where a fire originating within the Park could be safely stopped before reaching adjacent urban areas.

Required Action:

The fuelbreak will be retained substantially as constructed. Selected areas of indigenous brush species will be permitted to recover, while efforts to control non-indigenous species (e.g., broom) continue. Regular grassland maintenance will be accomplished through goat grazing, mowing or prescribed burning, as necessary. Eucalyptus sprouting will be controlled to minimize their presence here.

Policy:

The visual impact of the fuelbreak will be ameliorated by planting fire resistant trees and shrubs in appropriate areas.

Required Action:

Screen plantings along portions of Wildcat Canyon Road, with willow or redwood planting in moist swales, will be made.

The District will permit memorial tree plantings of indigenous species within designated areas of the fuelbreak when not in conflict with the District's vegetation management policies and when they do not compromise the fire control purposes of the fuelbreak.

Policy:

Animal habitat features in the fuelbreak will be maintained provided they do not conflict with fire control strategies.

Required Actions:

Fuelbreak maintenance in oak/bay woodland and north coastal scrub will be minimal to protect these valuable wildlife habitats.

Habitat features (e.g., logs, rocks, brush clumps) that provide cover and food sources for animals will be left in the fuelbreak.

Fuelbreak maintenance will preserve the "edge effect" (the interface between different vegetation types) which increases the wildlife value of a plant community. For example, clumps of brush will be retained in grassland.

Area 2 - Upper Berkeley Hills

Background:

This 160 acre area is a rich mixture of grass-, brush- and woodland on a moist, north-facing slope. Patches of eucalyptus, totaling about 40 acres, were planted here around 1910. The eucalyptus were severely damaged in the 1972 freeze and were logged in 1974. The eucalyptus stumps have since resprouted, but the native vegetation is still recovering. The western one-fourth of this area was used as an archery range until 1973 with coastal redwoods used for landscaping.

Policy:

Foster indigenous shrub and tree establishment within and around existing eucalyptus stands and allow the replacement of non-indigenous and senescent trees by native understory.

Required Actions:

The District will remove non-indigenous and senescent trees in areas where indigenous vegetation exhibits healthy growth.

Area 3 - Upper San Pablo Ridge

Background:

This 500 acre area includes the west-facing slope of San Pablo Ridge above Wildcat Canyon Road and South Park Drive. The vegetation is predominantly grassland, with smaller areas of brushland, woodland, Monterey pine, ponderosa pine, and blue gum and red gum eucalyptus. Localized variations occur where topography or water availability alter growing conditions, most notably in Big Springs Canyon, a tributary to Wildcat Creek.

Policy:

Maintain the existing landscape.

Required Action:

The District will maintain grass- and brushland through prescribed burning; pine and eucalyptus stands by occasional thinning. Although some natural regeneration may occur, there will be no further plantings of either pine or eucalyptus.

Policy:

Promote indigenous vegetation on Vollmer Peak.

Required Action:

The District will control eucalyptus sprouts by mechanical or hand removal on the immediate slopes of Vollmer Peak. The native oak/bay understory is healthy and occasional eucalyptus removal will allow them to become reestablished.

Area 4 - Sweetbriar Canyon/Willow Canyon/Wildcat Gorge

Background:

This 275 acre tract is predominantly grassland with fairly large stands of coyote brush. Dense brushland, willow groves and oak/bay woodland occupy the moist slopes and canyon bottoms. Eucalyptus occupies a small area north of the Merry-Go-Round. Artichoke thistle has invaded about 20 acres in this area. The area also contains several stands of mariposa lilies.

Policy:

Maintain and increase existing grassland.

Required Action:

The District will maintain and restore selected areas of grassland by mechanical means and/or through prescribed burning, consistent with recommendations of staff biologists.

Policy:

Prevent major wildfire in the eucalyptus groves.

Required Action:

The District will reduce wildfire intensity by occasional prescribed burning and/or hand clearing to remove the volume of forest litter in eucalyptus groves. A checkerboard approach will be taken with monitoring of the results.

Policy:

Encourage the growth of indigenous vegetation where feasible.

Required Actions:

The District will promote the establishment of indigenous understory in eucalyptus stands by controlling eucalyptus reproduction via hand and mechanical means.

The District will design construction activities so as to avoid the removal of mature indigenous trees.

Policy:

Maintain and protect mariposa lily habitat from weed and brush encroachment.

Required Action:

The District will maintain Oakland mariposa lily habitat by removing competing vegetation, chiefly artichoke thistle and coyote brush.

Policy:

Control artichoke thistle encroachment at park facilities (e.g., trails).

Required Action:

Under the supervision of the Integrated Pest Management Specialist, District staff will use a variety of methods (e.g., hand removal, mechanical clearing, seed head removal, selective chemical means) to reduce plant populations at identified problem sites.

Area 5 - Laurel Canyon

Background:

This 550 acre area includes the Tilden Nature Area and its facilities. It includes all of Laurel Canyon and Laurel Creek, a major tributary of Wildcat Creek. It also includes two large eucalyptus groves, several small groves of conifers, dense oak/bay woodland, mature coastal brush, rich riparian vegetation, grassland and areas of coyote brush.

Policy:

Maintain and enhance the existing indigenous landscape through gradual vegetation changes where appropriate.

Required Actions:

The District will prevent the spread of eucalyptus into areas of indigenous vegetation by removing young plants.

The District will promote indigenous vegetation beneath the eucalyptus by occasional thinning within the groves.

The District will remove eucalyptus litter accumulations through hand clearing and/or prescribed fire.

The District will maintain grassland on the south and southwest slopes of Wildcat Peak by appropriate methods.

The District will design construction activities so as to avoid the removal of mature indigenous trees.

With the exception of established memorial groves, the District will abandon maintenance of mature conifer groves, except for routine surveillance for insect infestation (which will be treated in accordance with the District's Integrated Pest Management Policies), and prohibit new plantings of these groves to allow for natural regeneration of indigenous vegetation.

The District will maintain the large sedge meadow south of Laurel Creek by brush cutting and prescribed burning.

The District will maintain the unusual flora of the alkaline springs along Wildcat Fault through prescribed burning and/or hand clearing.

Area 6 - Oak Canyon

Background:

This 50 acre area includes the north-facing slopes between Canon Drive and Central Park Drive, where eucalyptus, broom and other non-native plants are adversely affecting the oaks and other indigenous vegetation.

Policy:

Protect mature indigenous trees.

Required Action:

The District will design construction activities so as to avoid the removal of mature indigenous species.

Policy:

Remove exotic plants which are adversely affecting indigenous growth.

Required Actions:

The District will thin young eucalyptus along Canon Drive to benefit the oak understory.

The District will periodically remove accumulations of broom and German ivy.

Area 7 - Golf Course

Background:

Tilden Golf Course is a largely landscaped area covering approximately 120 acres in Wildcat Canyon. Concern has been raised regarding the effects of landscaping on native riparian vegetation, habitat and the potential for stream degradation from runoff of pesticides and fertilizers used to maintain the landscaping.

Policy:

Enhance and replace indigenous riparian vegetation along Wildcat Creek.

Required Actions:

The District will negotiate with the Golf Course concessionaire to establish a 50 to 100 foot wide riparian corridor wherever possible along the length of Wildcat Creek and two tributary streams. Sparsely vegetated areas along the Creek will be restored to riparian growth, where feasible, with general vegetation densities along the riparian corridor increased through plantings. Mowing would no longer be allowed in this area.

Policy:

Reduce the potential for chemical pollution of Wildcat Creek from landscape maintenance at the Golf Course.

Required Action:

In cooperation with the Golf Course concessionaire, the District will develop an integrated pest management program for the Golf Course to control the potential movement of chemicals into Wildcat Creek.

b. Special Protection Units

Special protection units are areas requiring management strategies that differ from those applied to their general surroundings. These units contain unique physical features that warrant special management. In Tilden Park, only one plant species, the Alameda manzanita, and one wildlife species, the Alameda whipsnake, are listed as endangered under State designation. The other areas listed below have been so designated based on their unique associations. (See Figure 7.)

Alameda manzanita (Manzanita pallida) habitat

One plant in Tilden Park, the Alameda manzanita, is listed as endangered under the California Endangered Species Act. While endemic to the East Bay hills, its primary occurrence in Tilden Park where it has been planted along Shasta Road, Golf Course Road and Wildcat Canyon Road. In some areas, plants are succumbing to heavy shading by oak and eucalyptus. An Alameda Management Plan was prepared by the EBRPD and submitted to the State Department of Fish and Game. This plan outlines specific treatment measures.

Required Action:

Park staff will periodically thin or remove the competing overstory.

Oakland mariposa (Calochortus umbellatus) habitat

This plant is found in association with brush and eucalyptus, both of which threaten to block out adequate sunlight to the Oakland mariposa. This association is being encroached upon by brush and artichoke thistle; collecting by park visitors is also taking its toll



Oakland Mariposa

Required Action:

The District will periodically remove brush and eucalyptus litter accumulations by hand and/or mechanical means to ensure adequate sunlight for plant growth.

Alkaline seep

This association, which includes arrow grass, spike weed and salt grass, is found near the EEC and is negatively affected by shading, forest litter accumulations and foot traffic.

Required Action:

Park staff will periodically remove forest litter accumulations and eucalyptus limbs to provide adequate sunlight. Foot traffic will be limited through signing, and where necessary, the erection of barriers.

Sedge meadow

The large meadow along Laurel Canyon Trail is being encroached upon by coyote brush.

Required Action:

The District will periodically remove the coyote brush by hand, mechanical or grazing (goats) methods and will maintain the meadow by periodic burning or late summer mowing at those times recommended by staff biologists.

c. Notable Species

Several species of limited distribution, rarity, or that have attracted special attention, occur in Tilden Park. As biological investigations in the Park proceed, others will be recognized. Notable plant species include the western leatherwood (found in woodland associations), farewell-to-spring and a pink lupine colony (both found in open grassland), rock daisy and beard tongue (both occurring on rock outcrops). (See Figure 10.) Notable wildlife species include the rubber boa snake and the California newt. Because of the scarcity and small ranges of many of these species they must be given special consideration in land management practices. Use plans, trail placements and alterations to management practices will be evaluated for impacts to these notable species.



Western Leatherwood



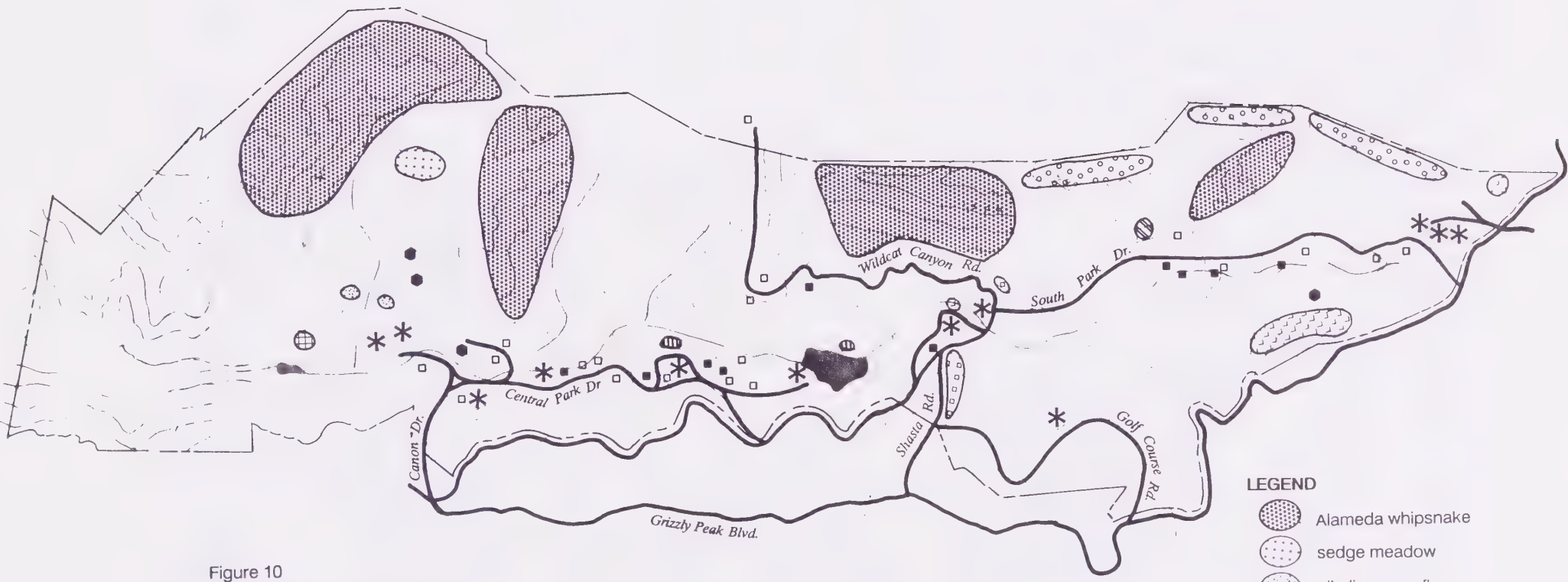
Clarkia

2. Wildlife

Background:

The wildlife in Tilden Regional Park includes a variety of species which reflect the complex mixture of grassland, brushland and forest habitats present.

For the most part, wildlife species exhibit a preference for one or more plant associations or types of habitats. While not confined solely to these habitats, each species is most likely to be observed in a preferred



- LEGEND**
-  Alameda whipsnake
 -  sedge meadow
 -  alkaline seep flora
 -  Oakland mariposa
 -  rock daisy
 -  Alameda manzanita
 -  western leatherwood
 -  ridgetop meadow (farewell-to-spring)
 -  pink lupine colony

Figure 10
NOTABLE SPECIES



habitat during periods of feeding, resting or breeding. In Tilden Park, the habitats frequented by over 150 species of wildlife have been described by Dr. R. C. Stebbins in Appendix II of the District's Vegetation Management Manual. (See Table 2.) With this and any



additional information which will become available as the Park's biological studies proceed, qualitative changes in wildlife species that may result from implementation of development or vegetation management proposals can be predicted with greater accuracy.

Additionally, the District will seek to reduce adverse impacts upon wildlife caused by human activity, e.g., the release of domestic dogs and cats or the timing of habitat management projects, or mortality caused by road kills.

Policy:

Maintain and restore habitat for indigenous wildlife including mammals, birds, reptiles, fish, amphibians, insects and other invertebrates.

Required Action:

The District will develop vernal pools in two areas to provide additional water sources for wildlife. (See Figure 8.)

Policy:

Study selected wildlife and plant species to provide guidelines and feedback concerning habitat management.



Required Action:

District staff, in cooperation with the academic community, will institute a long-term program to plot the distribution and important breeding and sheltering areas of selected wildlife species and to monitor the populations of certain wildlife species which are

"indicators" of a diverse ecosystem. This program will consist of regular, reproducible, scientifically valid observations to document changes in wildlife populations to provide a basis for management

practices. The District will encourage scientific studies of the significance of road kills on wildlife populations especially California newts.

Policy:

Protect California newts migrating across South Park Drive.

Required Action:

The District will initiate periodic closure of South Park Drive after heavy rains to protect migrating populations of California newts. Signs will be placed along South Park Drive in advance to notify the public of these periodic closures.

Policy:

Provide suitable management when the population of any wildlife species declines significantly or rises to levels which result in damage to the Park's natural resources or conflicts with park uses.

Required Action:

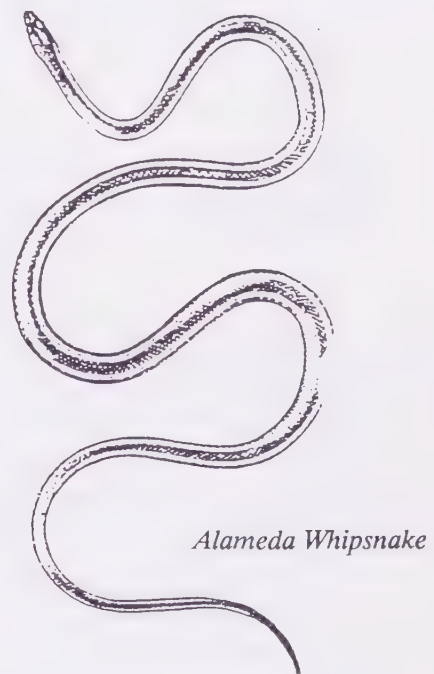
District staff will carry out appropriate habitat enhancement projects which have been scientifically demonstrated to be effective and will consult with the Department of Fish and Game or appropriate specialists if wildlife populations increase to levels which result in damage to park resources or undergo serious decline.

Policy:

Manage the plants and animals in Tilden Park in a manner which will maintain existing populations of the Alameda (striped racer) whipsnake (Masticophis lateralis euryxanthus) and any other jeopardized animal whose range and habitat requirements might include portions of the Park.

Required Actions:

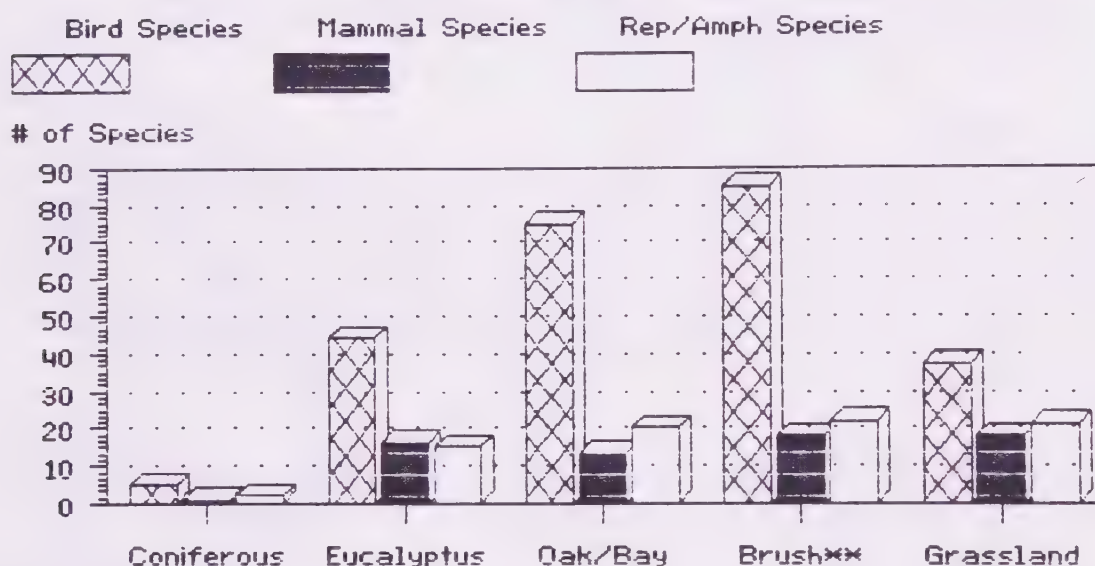
District staff will continue past efforts to determine the range and habitat requirements of the jeopardized animals which can and do live in Tilden Park and will modify their management practices as appropriate to foster and protect them.



Alameda Whipsnake

Within the area designated as habitat for the Alameda whipsnake in Figure 10, the District staff will limit prescribed fires to the late autumn and winter months after a period of several days when the temperature has not risen above 68 degrees F (20 degrees C). This will assure that the snakes are inactive in their underground burrows.

TABLE 2
TERRESTRIAL HABITAT USE*



* After Stebbins, R.C., 1975, "Vegetation Mngmt. Princ. & Policies" App.II, EBRPD

**Coastal Brush is a combination of "soft" and "hard" chaparral.

Policy:

Rehabilitate Wildcat Creek to improve fish population and associated riparian wildlife habitat.

Required Actions:

The District will negotiate the establishment of a riparian restoration and protection zone through the Golf Course with the Golf Course concessionaire. Where possible, this zone will extend from 25 to 50 feet on both sides of Wildcat Creek where it traverses this facility.

Trout populations and their habitat in Wildcat Creek will be monitored by District resource specialists. If previous fish planting indicates a potential for continued success, the District may carry out further plantings of native steelhead with the cooperation of State Fish and

Game and other interested parties. If adequate conditions can be maintained throughout Wildcat Creek, the District will make reasonable efforts to establish a permanent migratory steelhead population.

The District will improve fish habitat in Wildcat Creek through the emplacement of gabions and weir structures to stabilize stream banks, and the importation of gravels to create pools. Projects to improve fish migration routes, such as the clearing of debris jams and the development of fishways, will also occur.

The District will continue to review and comment on projects that have the potential to jeopardize steelhead migration in Wildcat Creek.

The District may develop an existing well at the Botanic Garden to supplement water flows in Wildcat Creek, thereby enhancing fisheries habitat and fish survival rates. The District will determine potential impact on the water table and other wildlife.

Policy:

Remove free-roaming domestic dogs, feral cats and feral ducks and geese when their presence conflicts with the previous policy or conflicts with existing recreational uses.

Required Action:

The District staff will trap and remove free-roaming domestic dogs, and feral cats and birds when their presence conflicts with native wildlife or existing recreational uses. Only live traps or nets will be used for this purpose. Trapped domestic and feral animals will be surrendered to County Animal Control Officers. Feral animals will be dispatched (killed) on site only when there is an immediate life-threatening circumstance as defined by District Ordinance 38.

3. Water

Background:

The water management goal is to preserve and enhance the water resources of Tilden Park through long-term management practices. Between Tilden and Wildcat Canyon Regional Parks, the District owns 7 square miles of this 11 square mile watershed, including the headwaters area. This circumstance presents an opportunity to implement a range of stewardship practices towards maintaining and improving the water quality of Wildcat Creek.

An overall water management plan for the Wildcat Canyon watershed, currently in draft form, was drawn from in developing the following policies and required actions. When coupled with other resource management policies and required actions, these provide a watershed management plan for the parkland. This is also true for Wildcat Canyon Regional Park and its Natural Resource Management Plan.

Policy:

Protect riparian zones from erosion and sedimentation.

Required Actions:

By using appropriate trail siting and signing, the District will restrict horse, foot and bicycle traffic from entering riparian zones to prevent soil erosion and sedimentation.

The District will redesign, reconstruct or otherwise provide adequate erosion protection at the downstream end of the spillway at Jewel Lake in order to minimize erosion and undercutting at the spillway exit pool.

Policy:

Reduce sedimentation of water courses caused by accelerated erosion and gullyng to the maximum extent possible.

Required Actions:

On an annual basis, the District will monitor parkland erosion to identify sources of sediment that may be contributing to stream degradation.



The District will seed erosion prone areas by hydroseeding, seed drilling or hand methods prior to the winter rainy season. Seed mixes will require no irrigation, and if possible, be comprised of indigenous species. Sediment basins or traps will be installed when appropriate.

Sediment basins or traps will be monitored frequently and cleaned out as necessary to retain their sediment holding capacity.

The District will remove Loop Road where it crosses Laurel Creek to improve water flow through this area. The District will also repair the gullying that has occurred (and continues to occur) here via rip rap and/or other means.

The District will establish and maintain drainage and erosion prevention devices along roads and service trails.

The District will require the implementation of erosion control measures as part of all construction activities involving the disturbance of surface soils or the removal of protective vegetation to be completed no later than October 1 of each year.

Park staff will monitor trail conditions during winter months. Trails will be closed to equestrian and/or hiker use if erosion and/or soil problems warrant.

Policy:

Protect water quality in Wildcat Creek from various potential pollution sources in order to protect fish populations and recreationists.

Required Actions:

The District will prevent uncontrolled flow of water and hazardous substances into Wildcat Creek from potential pollution sources such as the Little Farm, the Tilden Corporation Yard, urban storm drains or other chemical and/or sanitary sources. The District will control these flows through various means such as sumps and septic tanks and the repair of existing drainage facilities.

The District will regulate pesticide use within Tilden Regional Park via an Integrated Pest Management Plan.

Policy:

Control sediment deposition in Jewel Lake and other areas around the Environmental Education Center.

Required Actions:

The District will work with the City of Berkeley and Contra Costa and Alameda counties to develop systems to convey storm runoff from existing city streets into urban storm drains on the western slope, where

feasible. Where this is not feasible, water will be conveyed downslope in a non-eroding ditch or pipe to the level area west of the Lake. Where necessary, energy dissipation devices will be used. Slopes and water courses that have been damaged by erosion will be reconditioned through hand work (or machine, if accessible) and seeding. Check-barriers and other erosion control devices may also be used.



The District will dredge Jewel Lake as necessary to maintain a minimum pool volume of approximately 6 acre feet. The "duck pond" at the entrance to the EEC will continue to be maintained by dredging as needed.

4. Geotechnical/Soils

a. Soil Erosion

Background:

Accelerated soil erosion is occurring along trails, maintenance roads and streambanks. In part, this condition is related to the extremely wet winters and resulting high stream flows of the early 1980's. However, a number of man-induced factors have exacerbated this condition. For example, roads, trails and culverts are inconsistently maintained and gully erosion has resulted in many areas where poorly placed culverts or berms concentrate water across unstable soils such as landslides or road fill.

Policy:

Limit sediment from entering water courses by minimizing accelerated soil erosion along roads, trails and water courses.

Required Actions:

Sites exhibiting severe erosion or sedimentation will be identified and mapped.

The District will identify unstable sites along riparian corridors.

Structures necessary to stabilize badly eroding stream banks will be constructed.

Erosion controls (e.g., outsloping, water bars, gabions, check dams, catchment basins, rip rap, energy dissipators, erosion fabric) will be emplaced at identified problem sites and on steep roads and trails. Water bars, culverts and other erosion control devices will be regularly checked and maintained by park staff.

Grass seeding or planting of other native vegetation will be undertaken in areas of bare soil that are subject to surface erosion.

Where possible, the District will attempt to redirect water or stabilize the embankments of gullies.

The District will incorporate erosion plans as part of all capital improvement projects which involve grading or other activities that expose soil.

The District will continue staff training in erosion control practices.

Wet season construction will be limited.

b. Mass Wasting

Background:

Active landsliding is occurring throughout portions of Tilden Regional Park. Much of it appears to be concentrated along the Park's western urbanized boundary. Most of the active landslides along this boundary occur within historic large-scale landslide deposits that straddle both District and private lands. Although the predominant Orinda Bedrock Formation is naturally prone to earthflow activity, urbanization of the ridgetop has contributed to the present condition of mass wasting by increasing the amount of runoff and concentrating it through road and roof drains. Additionally, portions of the urban/park interface have been managed for fuelbreak purposes, altering the former vegetative characteristics.

The consequences of vegetation removal have not been clearly established; a consultant is currently studying this subject for the District. Active landsliding has increased sedimentation and erosion problems which have affected water quality. Landsliding has also threatened adjacent private lands and caused the temporary closure of Central Park Drive at Meadows Playfield and Lake Anza and also at Wildcat Canyon Road and Canon Drive.

Policy:

Minimize the risks of potential landslide related damages to private property, park resources and park users. The risks of creating new slides or reactivating existing deposits should also be minimized.

Required Actions:

Active and historic landslides near urban boundaries, within the fuelbreak, or near District facilities will be identified and mapped.

Where necessary, corrective actions will be taken to mitigate problems at sites that contribute substantial quantities of sediment to water resources.

The District will comply with Public Resources Code 831.25 when notice of potential damage to neighboring land is appropriate.

The District will work with city, county and private landowners to mitigate runoff conditions that contribute to landslide movement.

The District will minimize park uses and construction activities on existing landslides, or on steep, potentially unstable slopes.

The District will perform a reconnaissance at major slide sites during winter months and will undertake any necessary remedial action at the earliest possible time.

The District will seek agreements with adjacent property owners to avoid development which could be damaged by landslides crossing common property lines and to limit the District's liability in such cases.

Policy:

Keep Canon Drive open at all times to the maximum extent possible.

Required Actions:

Any landslide debris shall be cleared as soon as possible.

If significant slide movement should occur, remedial plans will be designed by a geotechnical consultant.

Policy:

Stabilize the Lake Anza slide to prevent further risk to Wildcat Canyon Road and to the Lake Anza parking lot.

Required Action:

The District will work with the City of Berkeley to design and install a retaining structure directly below Wildcat Canyon Road (above the main Lake Anza parking lot) to prevent further headward erosion of the landslide scarp. The District will design and install a buttress for the toe of the slide at the parking lot and attempt to direct surface runoff away from the body of the slide.

Policy:

Maintain the section of road below the Meadows slide at Central Park Drive to the maximum extent possible without incurring great expense for stabilization.

Required Action:

The section of road crossing through the toe of the Meadows slide will be regraded as often as necessary to keep the road open if movement should continue.

Policy:

Improve road drainage along Wildcat Canyon Road so that runoff is not directed into active landslides.

Required Action:

The District will work with the City of Berkeley and Contra Costa and Alameda counties to identify and correct problem runoff sites along Wildcat Canyon Road.

c. **Seismic Hazards**

Background:

Two faults may affect safety within Tilden Park. The Wildcat fault trends southeast/northwest through Tilden Park along the canyon bottom, and the Hayward fault parallels the west side of the Berkeley Hills. Both faults pose potential threats to the parkland as a result of probable future earthquake activity.

Policy:

Minimize the risk of injury or damage potentially resulting from potential seismic activity.

Required Actions:

The District will obtain a geotechnical evaluation of the structural integrity of the Lake Anza and Jewel Lake dams and will make any necessary repairs.

The District will comply with the maintenance requirements prescribed by the State Division of Safety of Dams, such as prevention of the growth of woody species and large accumulations of tules and cattails and the control of rodent damage, to protect the surface integrity of the dams. Vegetation removal and rodent control practices will be consistent with the Integrated Pest Management program and policies.

The District will review the structural integrity of any structure along Wildcat Creek that straddles the Wildcat fault and make repairs or replacements as warranted.

The District will provide flexible connections for all utilities crossing faults in order to minimize potential ruptures and leaks (e.g., sewage) in the event of an earthquake.

5. Air

Background:

The air quality in Tilden Park generally falls within acceptable levels. However, due to Tilden's regional setting, occasional violations of state and federal air quality standards can be expected to occur.

Policy:

Operate in a manner which will avoid contributing to violations of air quality standards.

Required Action:

The District will conduct prescribed burning operations in accordance with the regulations of both State and Regional Air Quality Management Districts.

6. Cultural Resources

Background:

A 1983 archaeological reconnaissance conducted for the Wildcat Canyon/Tilden Regional Parks Resource Analysis did not identify any significant archaeological resources within Tilden Park. A previously identified prehistoric site, recorded in the vicinity of Jewel Lake, was not relocated during this study and may have been destroyed by construction of the Lake.

Many of the stone signs, drinking fountains, restrooms and drainage structures constructed by the Civilian Conservation Corps (CCC) during their tenure in Tilden Park in the 1930's still remain. Although these facilities may not meet state or federal significance criteria, they are an integral part of Tilden's character and should be preserved. Other remnants of past use include former landscaping, abandoned wells, and the Jewel Lake and Lake Anza dams.

Policy:

Preserve significant historic and prehistoric archaeological resources.

Required Actions:

The stone facilities constructed by the CCC will be retained where they do not conflict with user safety. These facilities will be maintained and/or restored in a manner consistent with preserving their historical integrity.

If archaeological materials are uncovered during the periodic dredging of Jewel Lake, they will be treated according to established District policy (EBRPD, 1987).

The discovery of presently unknown archaeological resources will be treated according to established District policy (EBRPD, 1987).

Policy:

Prevent desecration of pre- and protohistoric human remains.

Required Action:

In the event human remains are uncovered during routine park maintenance or the construction of new park facilities, procedures required by law and by District policies will be followed (EBRPD, 1987).

C. Facilities and Circulation

Introduction:

A variety of recreational facilities, scattered throughout Tilden, serve a wide range of user groups such as hikers, equestrians, birdwatchers, swimmers and picnickers. In addition, Tilden offers visitors unique attractions not generally found in other regional parks. Tilden's roadways are used by commuters and by Sunday drivers out to escape the city as well as high speed touring bicyclists travelling between the Berkeley and Orinda areas. The Botanic Garden, Golden Gate Live Steamers, Environmental Education Center, and Merry-Go-Round also draw groups of enthusiasts to pursue their particular interests.

Special events held in the Park also attract large groups of visitors. Some of these events, such as the Harvest Festival at the Nature Area, are sponsored by the District, others are sponsored by groups such as the Botanic Garden volunteers (annual plant sale) or the Berkeley Bicycle Coalition (Centennial Ride). Some of Tilden's recreational facilities are operated by special interest recreation groups and concessionaires. All of these outside organizations function under lease or operating agreements. Through this system, the District is able to provide special facilities it would not otherwise be able to offer. The developed facilities are generally the most popular facilities in the Park.

Issues to be addressed concerning Tilden's many facilities include: access for the disabled; auto congestion at heavily used facilities; conflicts between automobiles, pedestrians, bicycles and equestrians; and inadequate parking capacity at popular facilities. In order to give the public an idea of the scale and type of facility proposed, a brief description is given with an estimated range of numbers representing the parking or person capacity. Only detailed design study can determine actual capacities and facilities. The following are the guiding principles used for establishing policies regarding facilities and circulation within the Park:

- Guide public use for a growing population.
- Mitigate the impacts of heavy use in concentrated areas.
- Prevent damage of the natural resources.
- Encourage pedestrian, bicycle and equestrian use.
- Improve the trail system within the Park.
- Reduce auto, pedestrian, equestrian and bicycle conflict along park roads.
- Provide adequate parking at facilities.
- Minimize traffic through the Park.

1. Open Space and Visual Aspects

Background:

The Natural Unit comprises approximately 1,995 acres or 88 percent of Tilden Park. Undeveloped except for hiking, biking and riding trails, this area appears relatively natural, although a variety of non-indigenous trees and shrubs occur throughout the Park. The most notable non-indigenous plantings are the stands of eucalyptus and conifers. The many trails through these areas allow hikers and equestrians a variety of scenic views and easy and challenging hikes and rides as well as opportunities to get away from the nearby environment.

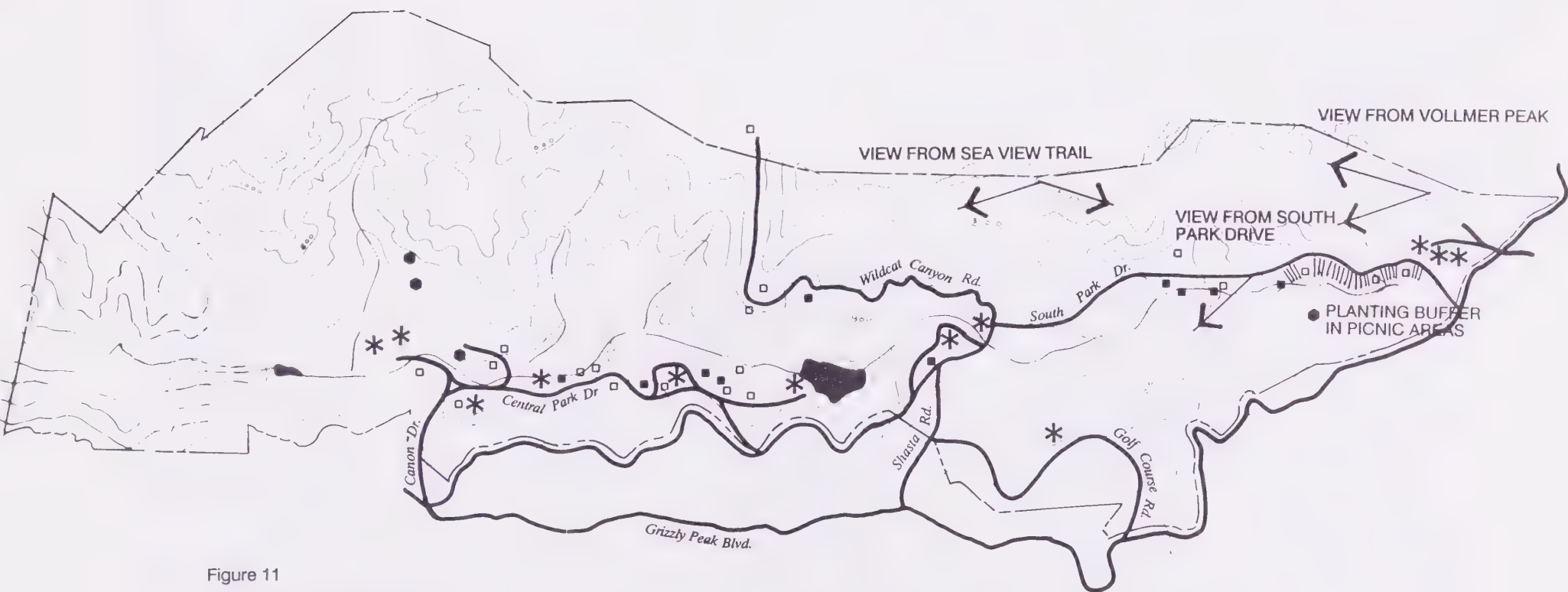


Figure 11

VISUAL ASPECTS



San Pablo Ridge, at the eastern edge of Tilden Park, affords a panoramic view of the San Francisco Bay region. This view includes the urban complex in the lowlands, and open space, including the adjacent land holdings of the University of California, the East Bay Municipal Utility District, and other regional parks (Wildcat Canyon, Briones). This represents one of the larger tracts of undeveloped public lands in the two counties. It is the view of open public lands that park visitors perceive and expect as intrinsic to their experience in Tilden Park.

Issues:

View corridors and special vista points are limited by encroaching chaparral and eucalyptus (e.g.: Sea View Trail, Vollmer Peak and South Park Drive).

Fences and parking areas create a visual impact on Tilden Park.

Some areas in the Park are over-planted with redwood trees and are shading the facilities at Gillespie Youth Camp and the Pony Ride.

Policy:

Intrusions upon the Park viewshed will be minimized. The visual impacts of any development in the Park will be assessed and ameliorated wherever possible.

Required Actions:

Fencing Policy

The District will minimize the need for fenced in areas wherever possible.

When existing fencing needs to be replaced, it should be set back from the road as far as possible (e.g., Golf Course and Little Train).

Replacement fencing at the Botanic Garden will not be moved from its present location because of the potential impact on the unique plant collections.

Remove fencing and facilities that receive low use (e.g., tennis courts).

Planting Buffers

Native tree plantings at new parking areas will provide shade at the site and screening along South Park Drive picnic areas from Padre to Lone Oak.

Preserving View Corridors and Vista Points

Park staff will judiciously remove vegetation to maintain the views from Vollmer Peak, Sea View Trail, and along South Park Drive.

Shade Management at Recreation Facilities

Park staff will thin and remove redwood trees to increase the sunlight at Gillespie Youth Camp and the Pony Ride.

(See Chapter III.C.6. for discussion of visual impacts of power lines.)

(See Chapter III.B.1.a. for discussion of fuelbreak screening.)

2. Circulation and Parking

a. Public Roads

Background:

Auto access to Tilden Park is from Wildcat Canyon Road, Canon Drive, Shasta Road, and Grizzly Peak Boulevard. Wildcat Canyon Road (a city/county road) bisects the Park on its way from Berkeley to Orinda, providing access from both east and west.

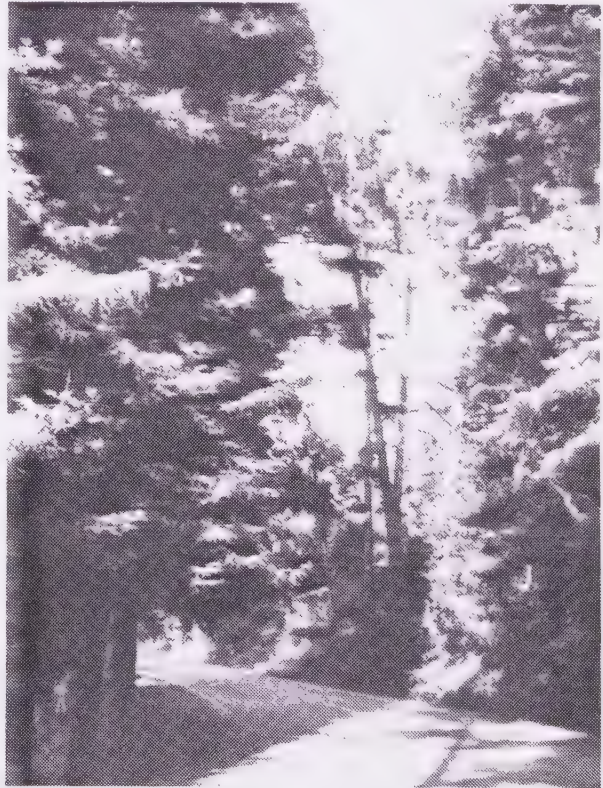
Internal circulation is provided by Central Park Drive, South Park Drive, Golf Course Road, and Wildcat Canyon Road. The District owns and maintains these roads.

Central Park Drive climbs from Indian Camp to the Merry-Go-Round and continues at a gentle grade to rejoin Wildcat Canyon Road. A branch also serves Lake Anza. Central Park Drive serves most of Tilden's major facilities and is often a locale of traffic problems.

Another park road, South Park Drive, connects Wildcat Canyon Road with Grizzly Peak Boulevard (South Gate) and serves as the major access to the picnic areas along part of its length. The road also receives some commuter use.

Shasta Road serves as a major access into the Park (Shasta Gate). It joins Wildcat Canyon Road at the Brazil Building. Golf Course Road serves the Golf Course, as well as connecting Shasta Road and Grizzly Peak Boulevard (Golf Gate). This road is primarily used by golf course patrons and bicyclists.

Other short, internal park roads exist near the Brazil Building (Anza View Drive), the Merry-Go-Round, Meadows Playfield and Mineral



Springs picnic area. These roads serve to provide parking for nearby facilities.

Issues:

The intersection at South Park Drive and Wildcat Canyon Road is difficult to cross by visitors to the Botanic Garden.

The existing design of roadway intersections may contribute to traffic safety problems.

Conflict of use (pedestrian, auto, bicycle) occurs along Wildcat Canyon Road.

The entrance to the Park at the intersection of South Park Drive and Grizzly Peak Boulevard needs improved visibility.

Policy:

The District will work with Contra Costa County to upgrade the road system to improve traffic safety in Tilden Park.



Required Actions:

Signs

Warning signs will be installed in advance of intersections or curves.

Double Yellow Lines

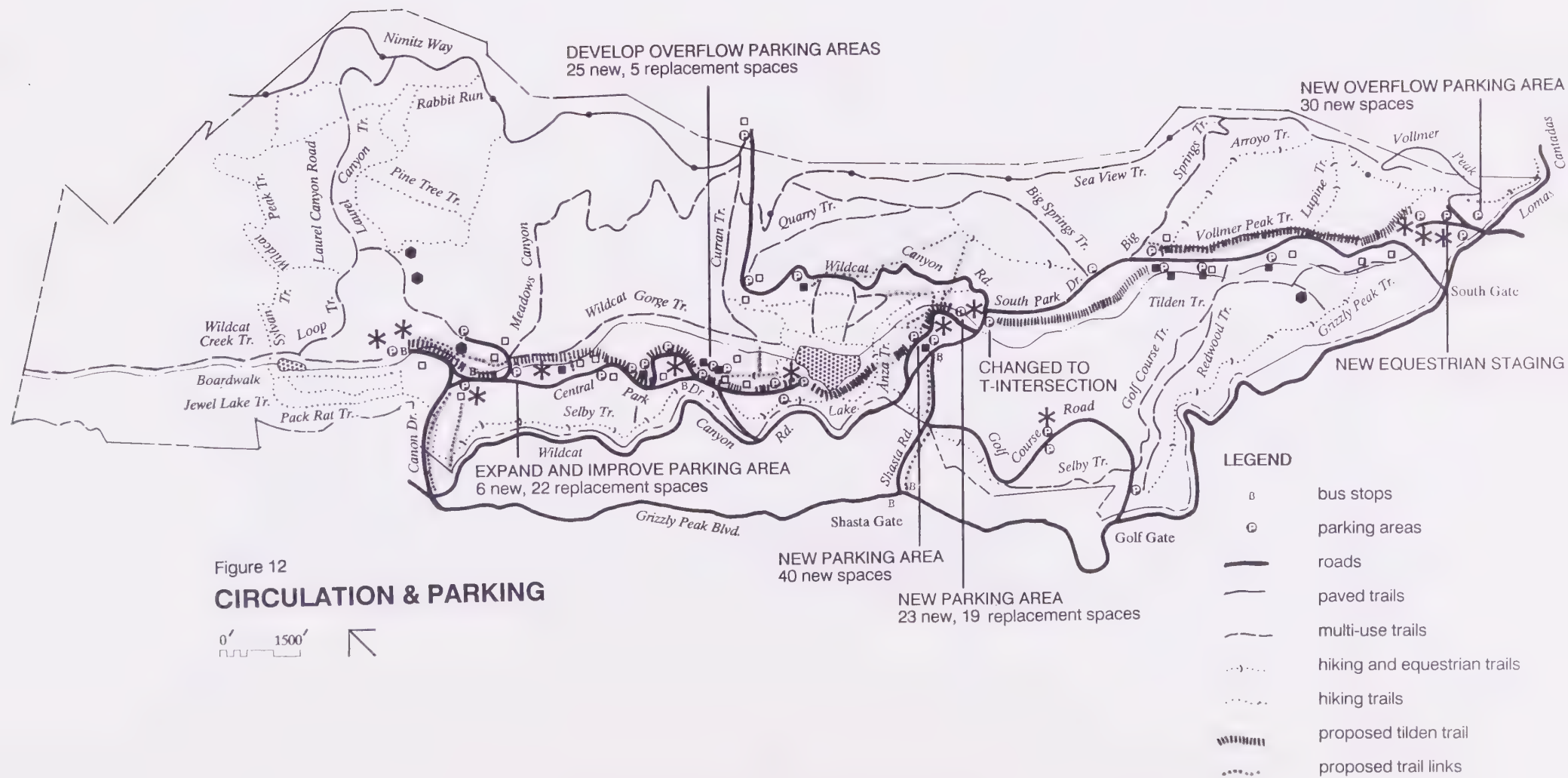
The District will install double yellow centerline striping near intersections and curves to prohibit passing maneuvers at critical locations. Reflective paint and raised pavement markers in the centerline will improve nighttime driving.

T Intersections

The District will study the design of current island intersections to determine if safety improvements are required.

South Park Drive Entrance

The District will improve the intersection of South Park Drive and Grizzly Peak Boulevard by constructing a right and left hand turn lane on Grizzly Peak Boulevard, removing vegetation at intersection to increase visibility, and improving entrance signs.



b. Trails and Service Roads

Background:

Approximately 13 miles of service roads in Tilden Park are used for maintenance, fire protection, hiking and equestrian trails. Four miles of roads are paved, mostly on Nimitz Way (2.3 miles) which formerly served an Army base on San Pablo Ridge. The service yards in Tilden Park and the communications facility on Vollmer Peak require year-round access and are also paved. Several dirt roads are graded annually and range from 10 to 35 feet wide. These are Laurel Canyon Road, Loop Trail, Sweetbriar, Sea View, Big Springs, Quarry Trail, Golf Course Trail, Redwood Trail and Vollmer Peak Trail.



Hiking and equestrian trails unsuitable for vehicles complete the circulation system. Most trails are used by horses, although some, especially in the Nature Area and around Lake Anza, are designed for hikers only. There are approximately 20 miles of hiking/equestrian trails in the Park. (Refer to Figure 14 for location of trails and service roads.)

Issues:

There is a lack of access for persons with disabilities and visitors with children in strollers.

There is a need for a well-marked trail system that links together the major recreational facilities.

The present trail network is lacking well-marked links between major trail systems.

An equestrian trail link is needed between the north end of Selby Trail and Central Park Drive.

Policy:

A well-marked trail system will be established to promote pedestrian and disabled access throughout Tilden Park. Trail use will be monitored periodically to evaluate habitat impact and rehabilitative needs.

Required Actions:

Tilden Trail

A new well-marked walking trail will be established running the length of Tilden Park from Jewel Lake to the Little Train around the Botanic Garden, and connecting with the Merry-Go-Round and Lake Anza. This trail will link together all the major park facilities by connecting several existing trails. (For location see Figure 12.) The southern section of the trail extending between the Botanic Garden and the Little Train may or may not be established depending on information obtained from the wildlife census program. The Board Resources Committee will review this section of the Tilden Trail prior to its final alignment.

Signing and New Trail Links

Signs will be placed at all trail intersections and where necessary new trail links will be constructed. (For location see Figure 12.)

Trail links will be signed and/or constructed at the following locations:

- The intersection of Selby Trail and Golf Course Trail at Golf Course Road.
- Wildcat Gorge Trail where it meets Lake Anza and the service road to link with trails on the east side of the Park.
- Mineral Springs picnic area to Quarry Trail.
- Quarry Trail to Vollmer Peak Trail.
- Signing Golf Gate off Golf Course Road designating it as a major trailhead.
- Equestrian trail link between the park property line at Lomas Cantadas Road and Sea View Trail.
- Equestrian trail link between the north end of Selby Trail and Central Park Drive.
- Hiking trail link between Selby Trail and Wildcat Gorge Trail below Anza View Picnic Area.

Loop Trails

A trail link will be constructed between upper and lower Wildcat Gorge Trail below the Botanic Garden to create a loop trail originating from Lake Anza. This loop will also connect with trails on the eastern side of the Park.

A hard surface disabled accessible loop trail will connect the Merry-Go-Round and Lake Anza. A hard surface trail exists in part between these facilities. This trail could be upgraded by formalizing one of the bootleg connections.

Trail Links to Bus Stops

Trail access and signs to Tilden Park will be improved at the bus stop at the intersection of Grizzly Peak Boulevard and Canon Drive and at Shasta Gate bus stop. (For location see Figure 12.)

Trail Links to Adjacent Properties

Wherever feasible, the District will establish trail connections with adjacent open space properties. A trailhead will be established at the Corporation Yard to connect Tilden Park trails to Siesta Valley and San Pablo Reservoir. A trail link to Claremont Canyon will also be provided.

Restricted Bicycle Use

Bicycle access through Tilden Nature Area will be limited to the Loop Road to provide a route to Wildcat Canyon. Bicycle and hiking access will be maintained even though the Loop Road will no longer function as a service road. Additionally, bicycle and equestrian access to Wildcat Gorge Trail will be restricted during wet weather conditions. The trail will be signed to inform the public of this restriction.

c. Parking

Background:

Parking areas are located at all major facilities, including trailheads and picnic sites. In general, the parking demand exceeds capacity during the summer months near Lake Anza, the Little Train and the Brazil Building. Demand also exceeds capacity at Inspiration Point near the entrance to Nimitz Way Trail. Demand for parking in this area exceeds capacity frequently because this hard surfaced, multi-use trail is accessible year round.



The total estimated parking capacity within the Park is about 2,500 spaces. About 1,600 are formal parking stalls, and the remaining 900 are informal roadside spaces. During peak times of the year, parking in prohibited areas occurs in roadside locations.

Issues:

Insufficient parking supply at the Botanic Garden, Little Train, Brazil Building, Inspiration Point, Sea View Trail, Pony Ride and Indian Camp causes parking and safety problems or damage to the landscape.

Gridlock occurs at Lake Anza during the summer.

There is no designated equestrian staging within Tilden Park although there are many equestrian users.

Informal roadside parking can restrict the passage of through traffic near the Little Train, Inspiration Point, Botanic Garden and Lake Anza.

Policy:

New parking areas will be clustered at high use facilities to replace roadside parking and to minimize the visual impact of the parked cars.

Required Actions:

Botanic Garden/Brazil Building Parking Areas

Converting 2 sections of the lower margin of the Brazil Building lawns along Anza View Drive to 2 parking areas will accommodate the large groups at garden lectures, tours, and plant sales. These new parking areas will also absorb visitor overflow from the Brazil Building, the lawn area, and the "Island" group picnic site. The new parking areas will provide approximately 80 additional spaces. (For location see Figure 13b.) The existing Camp Oak parking will be used for staff parking and storage.

Lake Anza Parking Areas

A loop road at the picnic sites closest to Lake Anza (Brook and Orchard), will connect 3 parking areas: the existing parking lot at Buckeye picnic area, a new area below Buckeye, and an expanded lot near Orchard picnic area. The existing gravel overflow parking lot near Lake Anza will be expanded to accommodate 15 more spaces. This will channel the heavy overflow parking from road-sides, reduce traffic hazards at Lake Anza, and allow emergency vehicles better access to this facility. A total of up to 45 new spaces will be provided. (For location see Figure 13b.)

Little Train Overflow Area

A gravel parking area across from the Little Train will accommodate overflow parking of up to 30 spaces for this facility and reduce roadside parking on Grizzly Peak Boulevard. (For location see Figure 13c.)

Meadows Playfield

The existing parking area at Meadows Playfield will be redesigned to accommodate both the Playfield and the Pony Ride facilities. The size of the parking area will not be increased.

Perpendicular parking will replace the existing unmarked parking area and will double the number of cars per linear foot and provide approximately 28 new spaces.

Sea View Trail (at Wildcat Canyon Road)

There is sufficient room on the south side of Sea View Trail to accommodate three to four vehicles. To ensure adequate clearance at the trail entrance to accommodate service vehicles, the current "no parking" signs will be changed to say "no parking from this point on."

In addition, approximately 8 parking spaces are available on the north side of the road with a crosswalk in between. Overhanging limbs and brush will be removed where necessary, for approximately 150 feet on either side of the crosswalk to provide for pedestrian safety.

Equestrian Staging

The existing overflow parking area above the Corporation Yard is sited for an equestrian staging area because it is located at the periphery of Tilden Park with convenient access to Highways 24 and 13. This site will make it possible to keep horse trailers out of the interior of the Park and to avoid the crowds of Little Train visitors, where a separate overflow parking area will be provided. This site is also close to existing water lines which will provide horses with water. (For location see Figure 13d.)

The existing parking area will be graded and graveled. The equestrian staging area will have a signed circular layout to serve primarily horse rigs (approximately 6) and a limited number of automobile spaces for hikers using the Vollmer Peak Trailhead.

Golf Gate

Grading and graveling the existing parking area at the intersection of Grizzly Peak Boulevard and Centennial Drive and increasing the parking area to accommodate up to 6 more spaces will establish this site as a trailhead serving the southwestern side of Tilden Park.

Signing

The District will place "no parking" signs in areas where illegal parking occurs to direct parking into more appropriate spaces.

d. Public Transportation

Background:

A.C. Transit provides bus access to several points along the western side of Tilden Park. Line 67 stops at the intersection of Spruce Street and Wildcat Canyon Road near the Environmental Education Center. Lines 7 and 8 both stop at the intersection of Grizzly Peak Boulevard and Senior Street, one block north of Golf Course Road above the Golf Course. Stops are also provided at the intersection of Shasta Road and Grizzly Peak Boulevard above the Brazil Building. Line 8 provides service only during commute hours.



A summer bus program provides limited bus services to Tilden Park from June to September, 7 days a week. Bus line 9, the "Summer Park Service - Tilden," originates at the intersection of Center and Shattuck in Berkeley and stops on Central Park Drive at its intersection with Wildcat Canyon Road, at the Brazil Building, Lake Anza, and Indian Camp in Tilden Nature Area. A.C. Transit is presently in the process of evaluating their comprehensive service plan. The "Tilden Special" line is being considered for limited, year-round service.

There is no public transportation access provided to the east side of the Park. (See Figure 12 for the location of bus stops.)

Issues:

There is inadequate provision of public transportation to serve park visitors.

Policy:

Increased public transit service will be provided to accommodate park visitors.

Required Actions:

The District will continue to work with local transit authorities to extend service to Tilden Park on a year-round basis.

The District will improve trail access and signs from the bus stop at the Grizzly Peak Boulevard/Canon Drive intersection and the bus stop at Shasta Gate.

The following headways (time between buses) will be improved contingent upon funding to expand this service:

Route 7 (New Route 68)

Improve midday and Saturday headways from 30 to 15 minutes.

Route 8

Provide midday, evening and weekend service on a 30 minute headway (no service presently exists during these periods).

Route 67

Improve evening headways to 30 minutes.

3. Disabled Access

Background:

Many facilities in Tilden Park were constructed before the need for recreational opportunities for persons with disabling conditions was recognized. As a result many facilities are not accessible. In addition, because of the Park's steep topography, providing wheelchair access is difficult. Indian Camp picnic area, the Merry-Go-Round, the Botanic Garden, the Little Train, the Little Farm, the Pony Ride, Lake Anza, and New Woodland group camp have limited accessibility for the wheelchair-bound. The Brazil Building and the Environmental Education Center provide a very high level of accessibility. Trails within Tilden which are more accessible to people who are disabled are Vollmer Peak, Nimitz Way, the Loop Road, Jewel Lake Boardwalk and Wildcat Creek. Because of the layout of facilities within the Park, and the steep, rough, narrow nature of trail connections between facilities, travel from activity to activity for the disabled or elderly visitor is primarily by automobile.

Designated parking for the disabled is located at Indian Camp (also serving the Environmental Education Center and the Little Farm), the Merry-Go-Round, the Brazil Building, and the Environmental Education Center.

The 1987 "Whole Park Access" study made an inventory of all District facilities to determine the degree to which they were accessible to the disabled and to identify ways to improve accessibility at major facilities. The study also made specific recommendations for Tilden Park.

Issue:

There is a lack of adequate access to park facilities to accommodate the physically disabled.



Policy:

Where feasible, the District will provide access to park facilities for persons who are disabled.

Required Actions:

The District will develop and maintain park facilities that provide access for persons who are disabled, consistent with Title 24 of the State Building Code.

The District will seek agreements with A.C. Transit Bus Service to provide wheelchair accessible bus service into the Park year-round.

The District will produce and distribute publications which describe the accessibility of the parks and identify designated sites throughout the Park.

(Specific disabled access improvements are mentioned under each facility discussion.)

4. Recreational and Interpretive Facilities

a. **Picnic Areas and Turf Meadows**

Background:

One of the most popular family and group activities in Tilden Park is picnicking. From 1982 to 1986, an annual average of 30,000 people used both the reserve picnic and youth group camping areas. Picnic facilities are concentrated primarily in 3 locations: along upper South Park Drive, on Wildcat Canyon Road in the Mineral Springs area, and between the Brazil Building and the Tilden Nature Area along Wildcat Canyon Road and Central Park Drive. Facilities include picnic tables, and braziers or barbecue pits. Irrigated meadows are close to most group picnic areas. Most picnic sites are served by parking areas.



Issues:

Many picnic areas need to be replaced.

There is a lack of safe vehicular access to Lakeview Picnic Area.

Shade trees are needed at picnic areas along South Park Drive.

The demand for group picnic areas exceeds availability.

Policy:

Relocate picnic areas from the edge of Wildcat Creek to preserve riparian habitat.

Required Action:

When picnic facilities need to be replaced they will be set back a minimum of 100 feet from Wildcat Creek.

Policy:

The District will increase the opportunity for picnicking by improving existing facilities and establishing new picnic sites.



Required Actions:

Tree Plantings

The District will plant trees within the picnic areas along South Park Drive to provide shade, privacy, and to screen these sites from South Park Drive. (See Chapter III.C.2.).

New Group Picnic Area

A reserve group picnic site will be located off of Anza View Drive, below the Brazil Building, because of parking capacity, water availability, and proximity to trails and facilities. This Anza View picnic area will be restored to its former use for group picnics.

Entrance to Lakeview Picnic Area

The District will improve vehicular access to the entrance of Lakeview Picnic Area.

Establish New Meadow/Remove Tennis Courts

The District will remove the tennis courts from their present site and allow natural vegetation of the area to occur.

Conversion of Family Picnic Areas to Group Picnic Areas

The District will change Quarry family picnic area to a group site in response to the high demand for reservable group picnic areas. The parking area will be increased to provide approximately 10 more spaces.

Conversion of Group Picnic Areas to Family Picnic Areas

The District will change Creekside Reserve Picnic area to a family site because of insufficient parking.

Improvements to Existing Group Picnic Sites

To accommodate large reserve group picnic sites, the District will improve existing facilities at Laurel and Meadows group areas and Gillespie Youth Camp.

Improve Disabled Access

The District will provide a disabled accessible path from the parking lot to the restroom at Indian Camp.

The District will designate parking spaces for the disabled closest to a picnic area in Indian Camp.

The District will provide disabled accessible drinking fountains at Indian Camp, and Wildcat View Camp.

b. Youth and Equestrian Camps

Background:

Tilden has 3 youth group overnight camps. Gillespie Youth Camp located in the southern end of the Park and Wildcat View and New Woodland located within the Tilden Nature Area. Gillespie Youth Camp is a popular facility with an open field, sheltered picnic tables, an informal parking area and an irrigated turf meadow.

Equestrians use a flat area across Wildcat Canyon Road from Mineral Springs as an undeveloped camp site for overnight rides several times a year.

Issues:

Nighttime irrigation of the Gillespie Youth Camp meadow disturbs campers.

Facilities at New Woodland and Wildcat View Youth Camps need replacement.

Redwoods are planted too close together resulting in overshadowing of the meadow in Gillespie Youth Camp.

Policy:

The District will improve the Youth Camp facilities to fully utilize overnight sites to meet the existing regional camping and picnicking demand.

Required Actions:

Irrigation

The Park staff will modify or discontinue the irrigation schedule.

Shade Management

Redwoods will be thinned to provide more sunlight on Gillespie Youth Camp meadow.

Equestrian Camp

The Equestrian camp will be allowed to remain at the traditionally used site.

Facilities Renovation

A Capital Improvement Plan for the Tilden Nature Area will include the renovation of facilities at New Woodland and Wildcat View Youth Camps.

c. Lake Anza

Background:

Lake Anza was originally constructed in 1938 as a water source for drinking fountains, the Golf Course, and other areas requiring irrigation in Tilden Park.

Lake Anza (named for Juan Bautista de Anza) was created by an earth fill dam built across Wildcat Creek. Filled during the wet months, it served as the Park's central reservoir; during the summer, water was pumped from it for various park uses.

Today Lake Anza serves as a popular swimming facility with a sandy beach, dressing room/



concessionaire/lifeguard station complex that is adjacent to a parking lot and irrigated meadow. Approximately 55,230 people utilized the Lake Anza swimming facilities in 1987.



Visual impact of the fuelbreak has Wildcat Canyon Road and residences Park as seen from the Lake.

It is a scenic amenity for the Park and a resource for wildlife. The Lake is heavily used by swimmers throughout the summer on warm weekends.

Issues:

Insufficient parking at Lake Anza results in gridlock and interferes with Merry-Go-Round parking.

There is insufficient provision of disabled access at Lake Anza swim complex.

Pesticide and fertilizer runoff from the Golf Course affects the water quality of the Lake. resulted in undesirable views of the perimeter of the

Swim complex is in need of renovation.

Policy:

The District will provide safe access and use of Lake Anza to park visitors.



Required Actions:

New Parking Areas

A new loop road at the picnic areas closest to Lake Anza will connect 3 parking areas: the existing parking lot at Buckeye picnic area, a new area below Buckeye, and an expanded lot near Orchard picnic area. The existing overflow parking lot near Lake Anza will be expanded to accommodate 15 more spaces. This will channel the overflow parking from roadsides and reduce traffic hazards at Lake Anza. (For location see Figure 13a.)

Water Quality

The water quality of Lake Anza will be protected by restricting use of chemical fertilizers and pesticides in the Golf Course. (See discussion of Water under Chapter III.B.3.)

Fuelbreak Planting

Undesirable views of the fuelbreak from Lake Anza will be ameliorated by plantings of native fire resistant trees. (See discussion of fuelbreak under Chapter III.B.1.)

Disabled Access

Disabled access to the restrooms, snack bar, drinking fountains and beach area will be improved under a Capital Improvement Plan to upgrade the swim complex facilities.

d. Botanic Garden

Background:

The 6-1/2 acre Botanic garden was established in 1937 by August Vollmer, a City of Berkeley Chief of Police, and Howard McMinn, a Professor of Botany at Mills College, to display California native plants. Works Progress Administration (WPA) crews and District staff built stone walls along the section of Wildcat Creek that flows through the garden to stabilize the stream garden banks. Flooding during the rainy season continued to be a problem, undercutting the stone walls and destroying planting beds. The creekbed was overlaid with



concrete to further stabilize the stream banks. On January 1, 1940, the nursery opened its doors to the public as a Botanic Garden. Today, 50,000 people annually visit the Garden.

The Garden features a rich and diverse collection of California native plants ranging from Mohave Desert cacti, to the coastal sagebrush association, pines from the High Sierra, and redwoods from the Oregon border.



In 1973 a 1,500 square-foot Visitor's Center was built to accommodate the Garden's popular lecture series, and an office for ongoing research projects.

The Botanical Garden extended its northwestern boundaries 3-1/2 acres down Wildcat Creek in 1985. This new area will be planted with trees and shrubs that will improve the Garden horticulturally and extend the collection of rare and endangered species. Some existing oaks and bay laurels will be left in place.

Because of its unique climatic setting Tilden Botanic Garden can grow representative plants from all the major plant communities of California. It contains an unsurpassed collection of rare and

endangered plant species found in the San Francisco Bay area. The Garden also specializes in complete collections of California pines, oaks, manzanitas, perennial grasses and aquatic plants.

Additionally, the Botanic Garden serves the community as an invaluable education resource. It is used by the District's interpretive staff and by botany, horticulture, landscape design, and other student groups.

Issues:

Some sections of the Garden's paths need to be modified to improve disabled accessibility.

There is a need for safer pedestrian access to the entrance of the Garden from the Camp Oaks parking lot.

The parking supply at the Botanic Garden is insufficient for high use periods.

Additional soil amendment storage area is needed.

Policy:

The District will provide sufficient parking and improved access to the Botanic Garden.

Required Actions:

New Parking Areas

Parking areas will be added to the road that skirts the lower margin of the Brazil Building lawn to accommodate Garden lectures, tours, and plant sales. (For location see Figure 13b.) Every effort will be taken to preserve the apple trees in the lawn area. Additionally, the parking area will be located and screened with trees to minimize its visual impact on the Brazil Building patio and lawn area.

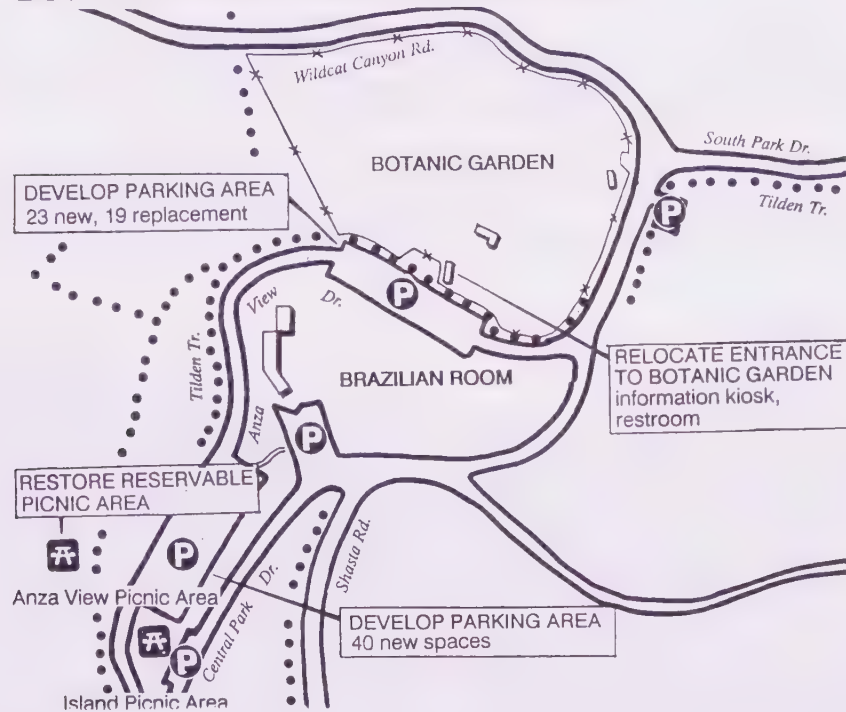
Improved Access to Botanic Garden

The entrance to the Botanic Garden will be relocated from the intersection of Wildcat Canyon Road at South Park Drive to Anza View Drive, across from the new parking area. A small office or kiosk (and disabled accessible restroom) will be located at the new entrance to orient visitors and to regulate public entry into the Garden. A similar restroom will be built outside the Garden to serve the public using the Brazil Building lawn.

Camp Oaks parking lot will be partially fenced off and used for soil storage and staff parking after the new parking area is available.

Figure 13b

BOTANIC GARDEN & BRAZIL BUILDING



Disabled Accessibility

The District will improve paths within the Garden to provide for wheelchair accessibility.

e. Brazil Building

Background:

The stone building, located at the end of Shasta Road at Wildcat Canyon Road, was dedicated as the Brazil Building on May 18, 1941. The jacaranda and sucupera hardwood panelling, from the Brazilian Pavilion at the Golden Gate International Exposition on Treasure Island in 1939 was donated to the District by the Brazilian Government.



The building houses a large special events hall which is one of the most popular wedding sites in the Bay Area. Associated with the hall are a kitchen and restrooms as well as an office security residence, and patio. The patio overlooks the Golf Course and southern end of the Park. The room is reservable on a rental basis for weddings parties, and conferences and is usually booked a year in

advance for popular dates. An estimated 30,000 people annually use the Brazil Building.

Issue:

Additional parking, which should be lighted for evening reservations, is needed.

Policy:

Provide adequate parking for visitors to the Brazil Building.

Required Actions:

New Parking Area

The lower margin of the lawn area below the "Island" group picnic area will be converted to parking. A lighted walkway will link this new parking area to the Brazil Building. Increased parking space will accommodate the overflow from large group events at the Brazil Building.



This parking area will also serve to channel vehicles off Wildcat Canyon Road when there are simultaneous events at "Island" group picnic, the Brazil Building, and the Botanic Garden. (See Figure 13b for location.)



f. Golf Course

Background:

The 120 acre, 18 hole Tilden Golf Course was constructed in 1937 by CCC and WPA workers. The Golf Course is highly cultivated and irrigated to maintain green fairways and has been landscaped with both native and exotic species. Eucalyptus, once a predominant tree on the course, have been gradually replaced with redwoods.

The Golf Course traverses fairly steep terrain which adds to the difficulty of play. It is a relatively slow paced course because of topography and short holes. Approximately 79,000 golfers played the Course in 1985. Use is heaviest on Friday, Saturday and Sunday, with the hours between daylight and noon and between 3 and 5 p.m. generally the most heavily used periods. Ninety percent of the Course use occurs between March and November.

A high percentage of the Golf Course perimeter is fenced with chainlink to regulate public entry. The fencing is visually intrusive, particularly along Golf Course Road.

Wildcat Creek, a seasonal creek, runs through the Course. Holes 4, 5, 11, 12, 16, 17 cross it. Since the Course was constructed, the riparian vegetation has been reduced in order to keep the fairways and rough clear for fast play. However, the lack of tree and shrub cover along Wildcat Creek decreases the habitat value for wildlife and for trout downstream by raising the water temperature. The ground surface of the course tends to impede water percolation and thus as increased runoff in the creek. This has resulted in the concreting of the creek in the Botanic Garden. An Integrated Pest Management program is being established to reduce the use of pesticides and other chemicals which could affect water quality and habitat value.

The Course is open every day of the year during daylight hours and is operated by a private concessionaire. The term of the lease is for 15 years ending in the year 2000 with options for extension for another 25 years. In addition to the 18 hole Golf Course, the operation includes a driving range, pro shop, food and beverage facility, parking, and offices and services customarily associated with municipal golf courses such as equipment rental and golf lessons.

The Golf Course pays an annual rent to EBRPD based on a minimal fee or a percentage of gross revenues. Utilities are paid by the concessionaire who has rights to explore and develop water rights and to use the Lake Anza water supply upon permission of the District. The Golf Course requests an additional 50 parking spaces. The Golf Course uses an amplified public address system which is audible at adjacent residential properties.

The concession contract provides that changes to the Golf Course may be suggested by the concessionaire in 5 year development proposals which require approval by the District's Board of Directors. The current 5 year plan calls for maintenance improvements not involving land use changes. The District may request reasonable alterations for the protection of the public and adjacent park properties.



Issues:

The chainlink fence creates a visual impact along Golf Course Road.

The riparian vegetation has been removed along Wildcat Creek in the Golf Course, reducing riparian habitat.

Pesticide and fertilizer runoff from the Golf Course affects the water quality of Wildcat Creek and Lake Anza.

Amplified sound at the Golf Course is audible at adjacent residential properties.

Policy:

The Golf Course will be retained for its recreational and revenue producing values. Its planning will be integrated into parkland goals that improve the wildlife habitat, the water quality of Wildcat Creek, and the scenic qualities of the Park.

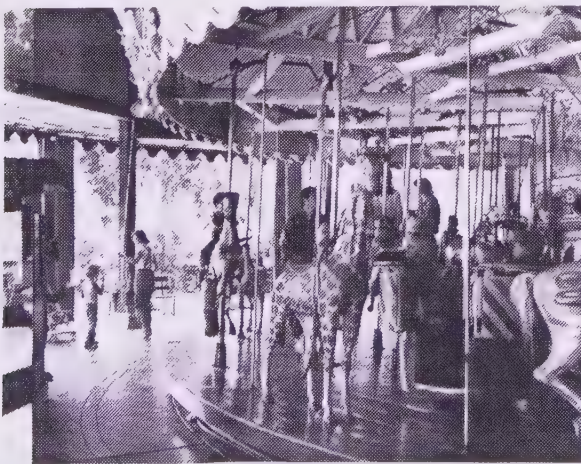
Required Actions:

Fencing

Fencing that is being improved or replaced will be set back from roads, trails, and activity areas when this relocation would not adversely affect the operations. Where feasible, fencing will be moved within a wide planted border.

Riparian Habitat

The District will reestablish approximately 1,120 feet of riparian habitat within the Golf Course, as indicated in the Natural Resource Management Plan, to improve wildlife habitat.



Public Address System

The Golf Course loudspeaker has been redirected to ameliorate its audible impact on nearby residences.

g. Merry-Go-Round

Background:

The Tilden Merry-Go-Round was built in 1911 by European artisans employed at the Hershell Spillman Company of Tonawanda, New York. The Merry-Go-Round is noted for its 59 hand carved horses and menagerie animals hand carved from poplar wood as

well as its organ which plays perforated roll music. Hand painted scenes decorate the center of the structure. It was previously situated in 3 different parks in Southern California before coming to Tilden in 1950 when its capacity was enlarged by 25 percent. In 1976 it was added to the National Register of Historic Places and was refurbished in 1979. The Merry-Go-Round is open to the public on a fee basis and approximately 200,000 visitors rode it in 1986. A children's play area, adjacent to the Merry-Go-Round, is used regularly by families that visit this facility. The existing parking lot is sufficient unless picnickers or swimmers use up Merry-Go-Round spaces. Sunday is the highest use day. The Merry-Go-Round is operated by a concessionaire.

Issues:

Children's play area structures need repainting and the sand box needs replacing.

On peak use days at Lake Anza visitors, who cannot find parking near the Lake, park here which results in overcrowding at the Merry-Go-Round parking lot. Disabled access to the Merry-Go-Round and drinking fountains is needed.

Policy:

The Merry-Go-Round, an historic and popular facility, will be retained while eliminating parking problems and providing access to disabled park users.

Required Actions:

Parking

Additional overflow parking near Lake Anza will be provided so that swimmers will not use the Merry-Go-Round lot.



Facilities Improvements

A Capital Improvement Plan will provide for a disabled accessible drinking fountain, independent access to the Merry-Go-Round, and improvements to the children's play area. (See Figure 13a for location.)

h. Old Driving Range

Background:

Across from the Golf Course parking lot, a bowl shaped area of approximately 10 acres is known as the "Old Driving Range." It has been used for recreation and service purposes over many years. It presently includes an estimated 60 car parking lot and is served by water lines. The driving range was moved to the center of the Golf Course and the site was then converted into the operations center for EBRPD mowing and landscaping crews. Facilities included an office and service residence, a growing ground and a fenced perimeter.

Many mature exotic trees now growing on the site were planted during this time. In the late 1970's the service structures were removed.

Issues:

The California Native Plant Society (CNPS) has requested up to a 3/4 acre growing ground/nursery area at the Old Driving Range site.

Policy:

To improve and utilize existing facilities to benefit park visitors.

Required Action:

California Native Plant Society Growing Ground Site

The District will allow CNPS to locate a nursery immediately adjacent to the existing parking lot at the Old Driving Range. The existing parking area will serve the nursery and required fencing will not be visible from Golf Course Road. All plans will be approved by the EBRPD Design Department. Design and operation at the nursery will accommodate an area approximately 40 feet by 75 feet for overflow stock from the Botanic Gardens plant sale. Additionally, the Tilden maintenance staff will continue to use a portion of the existing parking area for occasional soil storage.

i. Pony Ride

Background:

The Tilden Pony Ride has been a park attraction since the late 1940's. Tucked into a 1.2 acre area on a hillside adjacent to Canon Drive and fronting Central Park Drive where parking is located, the facility

features two tracks. The smaller ring for young children or "sweep", can accommodate up to 6 riders. A sweep is a 20 foot wide riding wheel where ponies, tethered along the outside, walk slowly, turning the wheel. The large "fast track" also serves 6 at a time. A small picnic area and a service residence trailer are located near the barn and corral where the ponies are corralled from April to November. The concessionaire may also operate a hayride on the premises. The Pony Ride operates from June to August.

The concessionaire may improve the property with District approval. The District provides perimeter fencing, water, garbage and manure removal. The concessionaire pays a fee or percentage of the gross receipts to the District.

The Pony Ride is a popular facility, has many regular riders and its use is steadily increasing. Summer Sundays are generally the busiest days although the number of visitors varies with weather and other factors.

Issues:

Rings expansion required to accommodate existing and future demand.

Existing parking supply is inadequate during peak use periods.

Policy:

To maximize the potential of the site by providing needed improvements.

Required Actions:

An additional "sweep" or riding wheel will be placed next to the existing sweep.

Redesigning the parking area at Meadows Playfield will provide an increase of parking spaces for Pony Ride visitors.

j. Steam Trains - Golden Gate Live Steamers

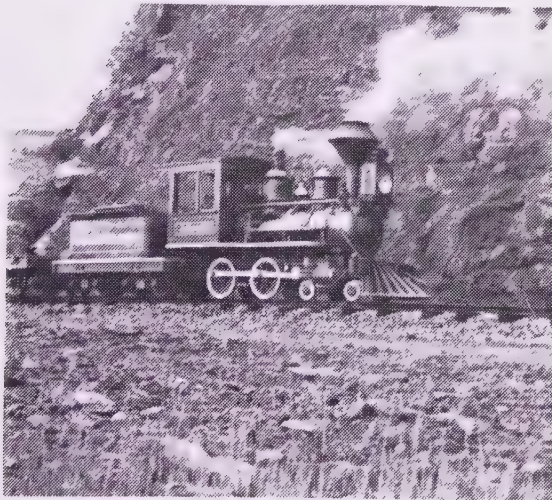
Background:

The Golden Gate Live Steamers (GGLS) lease an area adjacent to the Redwood Valley Railroad near the intersection of Lomas Cantadas and Grizzly Peak. The purpose of the GGLS facility is to provide a place for the development and operation of a scale model railroad on a non-profit, non-commercial basis for club members and the general public. GGLS established its original facility in Redwood Park in 1948, and relocated (at District request) to its present location in Tilden Park in 1971.

The facility consists of a loop track system totalling about 10,000 feet in length for model steam trains of various scale. One track is

elevated so that the smaller trains can be ridden by their owners. Near the center of the facilities an area with short raised track sections in radiating patterns serves as "steaming bays" where the engines are initially steamed up. The locomotives vary in length from 1 to 15 feet (including tender) and weigh between 35 to 2000 pounds. The District owns some equipment, trains, and trackage which is maintained by the club.

Public access is restricted to the "Tilden Depot" at the edge of the facility which is reached through the Little Train Station area. At the depot, members of the public are permitted climb aboard one of the larger trains for a short ride around the facility on a voluntary donation basis.



Other facilities include a clubhouse with an adjacent picnic area, car barns, a tool shed, and a paved parking area.

On-site parking can accommodate about 45 vehicles. As many as 400 persons have visited the GGLS on one day.

The club members are allowed to camp overnight for special events 10 times a year, to sell food and other items to members, and to participate in nighttime activities with District

permission. EBRPD provides water, garbage pick up, sewer pump out and fencing. The club pays no rental or use fees.

Issues:

There is insufficient parking for special event weekends.

There is a need for additional indoor storage space.

The club requests an addition to their facility to extend their track, providing members with new projects. This area is located downhill and to the north of the existing tracks.

Policy:

To retain and improve this facility to benefit this special interest recreation group and the general public.

Required Actions:

The District will reassess the storage needs of the GGLS and Redwood Valley Railway when the Corporation Yard is relocated and will consider allowing these groups to use this facility for indoor storage if it is not in conflict with District operations staff.

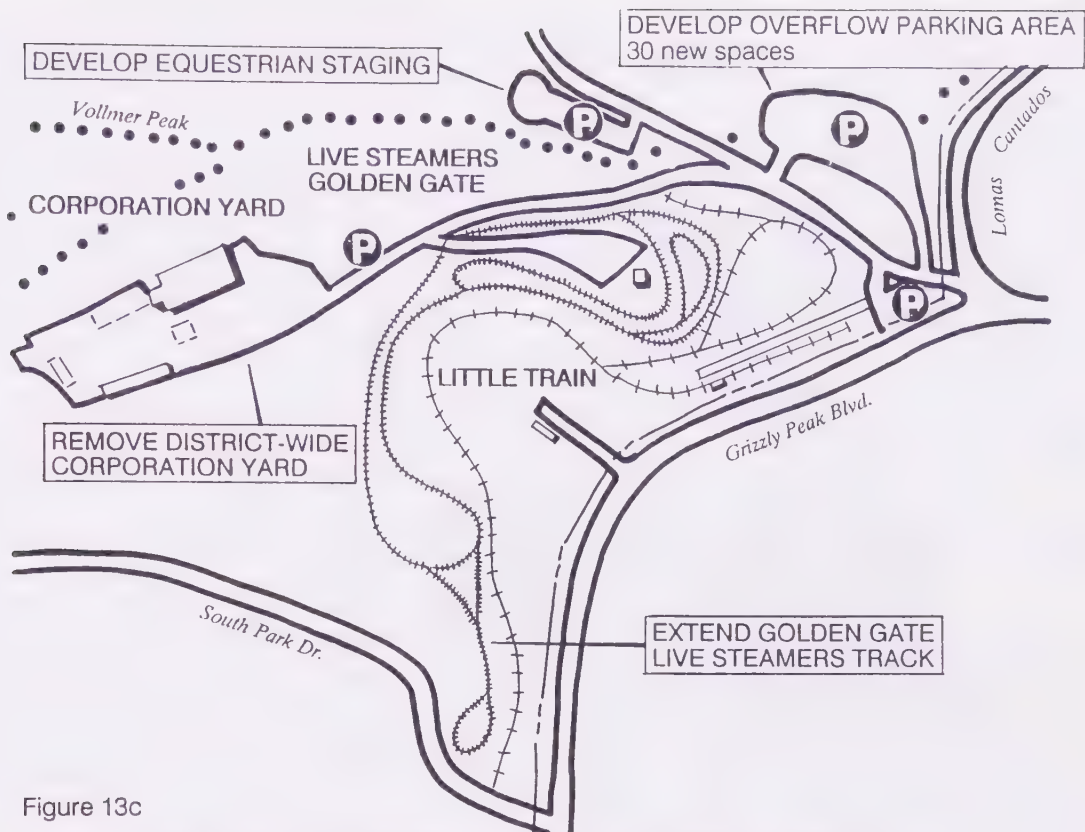


Figure 13c

LITTLE TRAIN, GOLDEN GATE LIVE STEAMERS & CORPORATION YARD

The District will allow the concessionaire to develop a short branch extension to the main track within the existing fenced train area. This track would be used by club members operating engines. (See Figure 13c for location.)

GGLS will work with District staff to increase public access and events to their facility (e.g., model train tours and demonstrations).

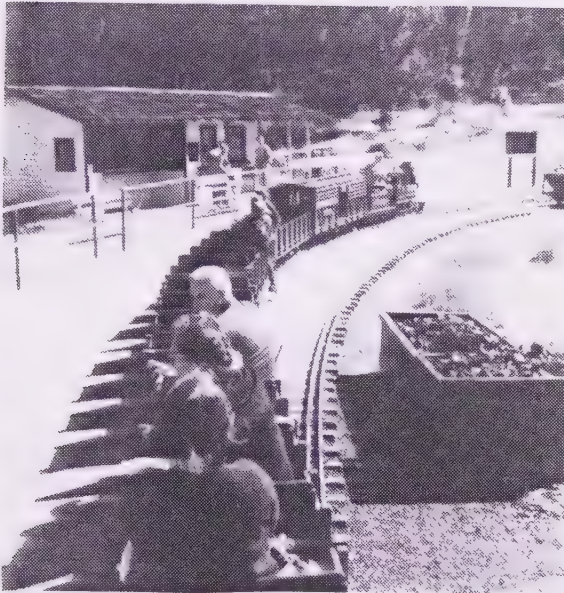
k. Steam Trains - Redwood Valley Railway

Background:

The Redwood Valley Railway (RVR), popularly known as the "Little Train" since 1952, is considered one of the most authentic miniature steam trains in the United States. It was located in the southern end of the Park by General Manager Walpole to bring more people into that relatively unused portion of the Park. The 1-1/4 mile ride is on narrow slopes where there are brief views of San Pablo Bay.

The miniature steam train was built at a scale of 5 inches equals 1 foot and it burns oil. Fully loaded, the train carries a maximum of about 100 people on the 12 minute ride.

Approximately 116,000 visitors rode the train in 1986. Although often thought to be a children's facility, the Little Train is oriented more toward adults with about 65 percent adult riders. The locomotives and



cars are accurate scaled down models of the full sized locomotives used before the turn of the century. It is a favorite stop for train buffs from all over the country. Saturdays and Sundays are generally the highest use days.

The facility is operated as a concession by the Redwood Valley Railway Corp. which provides rides to the public on a fee basis approved by the EBRPD. Facilities include a depot with ticket booth and storage barns built at miniature scale. A maintenance shop, converted in 1983 from an old army mess hall, has a separate

access from Grizzly Peak. Locomotives, cars and equipment are maintained and manufactured on-site. Parking for the train is located at Grizzly Peak Boulevard and Lomas Cantadas.

The trackage was expanded in 1971 and the entrance moved from South Park Drive to its present location. The 42 space parking lot has been marginally sufficient until the last 3 years during which it has been unable to meet the demand on crowded Saturdays and Sundays. An unimproved overflow lot on the road to Vollmer Peak is not well used because it is bumpy, not visible, and requires a short walk.

In addition to operating rides, the concessionaire sells souvenirs with District approval. The license fee is a monthly percentage of the total gross receipts. The District provides water, garbage, sewage pump out, and maintains the parking lot, fencing and signing. The operating agreement gives the District the option of purchasing the necessary equipment to operate the train upon termination of the agreement.

Issues:

There is insufficient parking to meet peak demand.

There is insufficient indoor storage.

A public restroom is needed which will be accessible from the parking lot when the Railroad facility is closed.

Disabled access is not available to the Little Train.

Policy:

To make improvements in this facility to better serve the public.

Required Actions:

A gravel parking area across from the Little Train will accommodate overflow parking of up to 30 spaces for this facility and will reduce roadside parking on Grizzly Peak Boulevard.

The District will make the existing Corporation Yard staff parking of 40 spaces available to the GGLS and Little Train for special events parking.

A public restroom and drinking fountain with disabled access will be constructed.

An 1880's style brick round house will be constructed near the entrance for storage, recreational, and educational value.

The concessionaire will provide independent access for wheelchair users onto the train ride. (See Figure 13c for location.)

1. Tilden Nature Area

Background:

Tilden Nature Area (TNA) is comprised of 640 acres of land, located at the northern end of Tilden Park and adjacent to Wildcat Canyon Regional Park. Ten miles of hiking trails ramble around Jewel Lake, the Environmental Education Center, the Little Farm, extending through Laurel Canyon to Wildcat Peak. A variety of habitats are represented at the Nature Area including riparian woodlands, eucalyptus groves, grasslands and coastal scrubland.

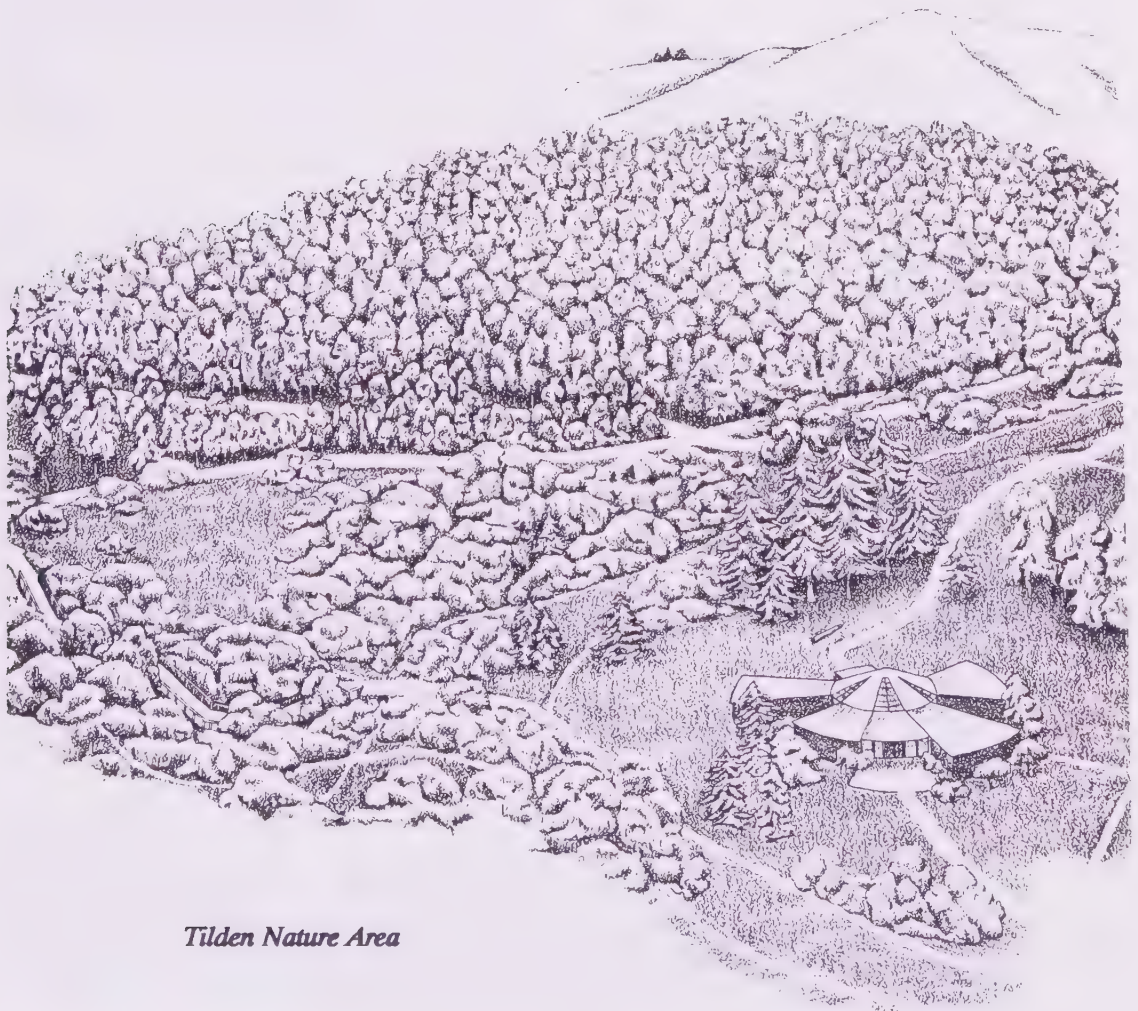
The boundary line between Wildcat Canyon Regional Park (WCRP) and Tilden Nature Area was changed under the 1985 Wildcat Canyon Land Use-Development Plan. The original boundary line was located along the fenceline at the TNA/WCRP gate and along the City of Richmond boundary line to the west. This relocation of the boundary to a ridgeline descending to Jewel Lake created confusion for park visitors and field staff and potentially jeopardized the special management policies of TNA.

The maintenance and visitor use policy for Tilden Nature Area reflects the intent to preserve and maintain this area as wildlife habitat and for environmental education purposes. The EBRPD Interpretive Master Plan states, "the interpretive goal is to educate an increasingly varied audience about the link between their lives and communities, the natural resources, and the larger world of nature."

The Environmental Education Center (EEC) provides the focus for a variety of interpretive services for Wildcat Canyon, Tilden Nature Area, and Tilden Regional Park. The Visitor Center building, completed in 1973 contains an exhibit hall with interpretive displays; a firewell for talks and programs; an auditorium for puppet shows, and other presentations; a laboratory classroom; a reception area with a small sales area; a nocturnal animal hall; and a photo/nature art display area. Approximately 96,800 people visited the EEC in 1987.

The Tilden Nature Area also is home to the Little Farm, designed and built from 1953 to 1955 to provide urban children exposure to farm animals. A carpentry class from Berkeley High School built the five-eighths size barn with materials donated by the Berkeley Kiwanis Club. There were an estimated 150,000 visitors to the Little Farm in 1987.

Two youth camps (Wildcat View and New Woodland), one group picnic area (Blue Gum), and several family picnic sites are also available in the Tilden Nature Area.



Tilden Nature Area

In addition to these facilities, a security residence is attached to the EEC and a nearby service yard and maintenance shop are also located in Tilden Nature Area.

Issues:

Wildcat Creek receives pollutants from inadequate drain and sewage systems at the Little Farm and the Environmental Education Center.

Additional ponds are needed for wildlife habitat and interpretive staff teaching sites.

Lack of maintenance of the culvert under the Loop Road at Laurel Canyon Road has resulted in undermining of this road.

Facilities need renovation (Environmental Education Center, Little Farm, picnic sites, group camps).



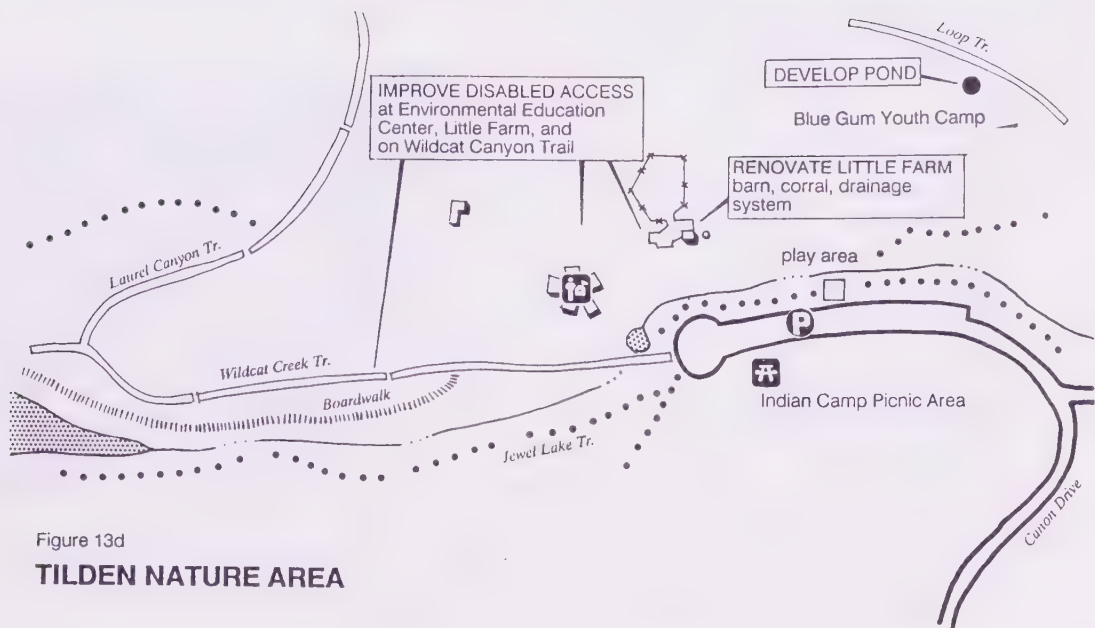


Figure 13d

TILDEN NATURE AREA

There is potential degradation of Jewel Lake, a visual, interpretive, and wildlife asset.

The 1985 TNA/WCRP boundary line alteration created confusion for park visitors and field staff and jeopardized the buffer of land surrounding the EEC used for a habitat and interpretive resource.

A conflict of use exists on nature area trails between visitors and bicyclists.

The steep western edge of the EEC lawn is difficult to maintain.

There is insufficient disabled access throughout Little Farm area, the EEC restrooms, and rotunda.

Policy:

The District will preserve wildlife habitat while providing environmental education opportunities for the public.

Required Actions:

New Ponds

New ponds will be developed in the EEC area to enhance wildlife habitat while providing educational opportunities for the public. Their location will be determined following consultation with wildlife specialists.

Naturalize Grounds Adjacent to Environmental Education Center

The edges of the EEC lawn will be maintained as unmown meadow.

Restricted Bicycle Use on TNA Trails

Due to the potential hazard between large groups of children on interpretive hikes and bicyclists on trails, bicycle use will be restricted in the Tilden Nature Area. The District will prohibit bicycles on all trails in TNA except Loop Road. This trail will provide bicyclists with an access route through Tilden Nature Area and out to Wildcat Canyon.

Facilities Renovation

A Capital Improvement Plan will be prepared to improve the facilities of the Tilden Nature Area including: The Little Farm drainage and sewer systems, the barns, corrals, pastures, youth and group camps.

Dredging and restoration of Jewel Lake will continue to maintain a minimum pool volume for wildlife habitat and interpretive use.

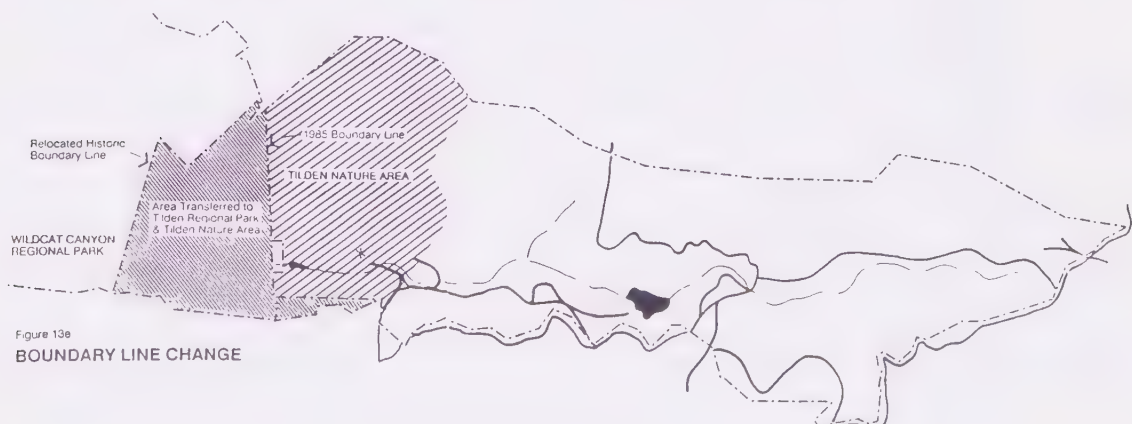
Loop Road/Laurel Canyon Road Intersection

The District will remove the culvert at Loop Road in Laurel Canyon and regrade the trail to be used for hiking, bicycling and equestrian purposes. The Loop Road will not be used for service vehicles.

When other service roads in Tilden Nature Area become impassable as the result of natural forces (e.g., landslides, earthquakes), an assessment will be made to determine the need for maintaining the road or abandoning the road as a service route.

Relocate TNA/WCRP Boundary Line

The TNA/Wildcat Canyon Regional Park boundary will be returned to its historic location along the fenceline and gate separating the two parks. The irregular western boundary line that has been located along the former edge of District land holdings, will be replaced with a continuation of the fenceline boundary to the western ridge of the Park. This change in the western boundary will transfer approximately 85 acres from Wildcat Canyon Regional Park to Tilden Nature Area. (See Figure 13e for location.)



Disabled Access Improvements

The District will construct hard surfaced paths around the barn and corral to provide access for the disabled.

The District will provide a disabled accessible drinking fountain in Little Farm area.

m. Rotary Club Assembly Area/Peace Grove

Background:

In 1955, the Rotary Club of Berkeley established the International Peace Grove in Tilden Park to celebrate the golden anniversary of Rotary International. This grove of 100 Giant Sequoias was planted as a monument to those individuals who have made a notable contribution to the advancement of international understanding, peace and good will.

At special annual ceremonies individual trees are dedicated to outstanding persons, chosen for their contributions to international peace. The redwoods of the Peace Grove grow on a slope, approximately 1-1/2 miles from the gate at the Inspiration Point parking area. The dedication takes place at a level area near the grove. Approximately 150 to 175 Rotarians and their guests gather there around the speaker who leads the dedication ceremony. Participants in the ceremony often include the elderly and disabled. Because the terrain at the ceremony area is uneven and slippery in wet weather, the Rotary Club has asked to improve the conditions of the ceremony area and proposes a Peace Grove "circle" to be used for a variety of outdoor gathering activities.

Issue:

There is uneven and slippery terrain at the dedication site.

Policy:

Rotarians will be permitted to continue their annual dedication ceremony without improvements to the site. Development of this site would intrude upon the Tilden Nature Area and may also impact an area used by newts during the non-breeding season.

Required Action:

Routine maintenance of the Peace Grove will continue to accommodate the Rotary Club's annual dedication ceremony.

n. Tennis Courts

Background:

Two tennis courts are located at the bottom of Canon Drive, in the north end of Tilden Park. The tennis courts were built during the late 1950's when public interest in regional parks focused on active recreational facilities rather than passive parkland uses (e.g., hiking, picnicking, nature study) and resource protection.

The current 1988 Master Plan states, "The District will provide a system of regional parklands and regional trails that will emphasize a variety of significant outdoor recreational activities." Tennis courts are not considered a regional outdoor facility. Other facilities like picnic areas and turf meadows (for field games) are designated in the Master Plan for regional use. The other facilities of Tilden Park attract constant regional usership. The tennis courts may receive occasional use, however, they serve primarily local residents. Tennis facilities are presently provided by city parks throughout the East Bay. Fifty-seven tennis courts are available, serving Oakland, Piedmont, Berkeley, and Albany, free of charge.

Additionally, the location of the tennis courts at the bottom of Canon Drive beneath Monterey pines causes ongoing maintenance requirements. Annual storm runoff from the steep slopes of Canon Drive deposits silt and debris on the tennis courts, eroding their surface. The constant accumulation of pine needles requires the surface to be swept regularly. Limited field staff resources are used to maintain the heavily used facilities of Tilden Park and are unavailable to service this lesser used facility. Given that it is unlikely that money of field staff will be available to maintain the courts, much less to restore them, the prospective playing life of the courts may be short and will eventually render the courts unusable.

Issues:

Costly court resurfacing, regrading of the surrounding lawn area, and other ongoing operations tasks are required to maintain the tennis courts for a limited, local usership.

Policy:

Capital improvement expenditures will be made on facilities that serve regional populations.

Required Action:

The tennis courts will eventually be replaced with meadow to provide additional open space for informal picnicking and field games. The East Bay Regional Park District Need and Demand survey cites picnicking as the most popular park activity. There is a greater need for turf meadow picnic areas than for tennis courts.

5. Service Facilities

a. **Corporation Yard**

Background:

The Corporation Yard at the southern end of Tilden Park had its beginnings when the U.S. Army who, in 1944 leased a 40 acre site west of Vollmer Peak as an anti-aircraft installation. A number of structures were built in the 1940's including barracks, a semi-buried blockhouse, anti-aircraft batteries, and communications facilities. Some 2,000 soldiers were billeted at this site. After World War II, the base functioned until 1960, when it was returned to the District.

In 1966, the Park District converted this site to a Corporation Yard. The blockhouse was the only Army structure which was kept, and was dug out of the hillside. Over the years, the Corporation Yard has been expanded to meet a variety of functions. Today it houses: The Fire Captain's office; Fire Station #1; a vehicle maintenance facility serving the northern portion of the District; the Central Stores District-wide warehouse; offices of the road and trails maintenance and carpenter crews; offices; and a security residence.

Issues:

The existing Corporation Yard is not centrally located for the entire Park District resulting in hours lost to travel time.

Inadequate water supply to the Corporation Yard in the event of a fire.

Pollution of watershed by industrial waste from mechanic shop.

Policy:

The District will relocate the Corporation Yard to a central site and improve the facilities to meet fire safety standards.

Required Actions:

Relocation of District-Wide Corporation Yard

The District will relocate the Central Stores warehouse, mechanics and carpenters shops, roads and trails offices, and Fire Captain's headquarters to a more accessible, centrally located site within the park system to reduce the industrial and visual impact of this service facility within the Park.

Vacated buildings will be removed with the exception of the blockhouse and the carport. These will be used to house a service yard for the Tilden Park operations staff, a substation for Public Safety, and fire trucks. (See Figure 13c for location.)

Water Systems Renovation

The District will replace existing water mains with those of sufficient size to supply anticipated flows for fire fighting purposes and also accommodate park uses to the service yard.

New Uses for the Site

The District will make the existing Corporation Yard staff parking of 40 spaces available to the Golden Gate Live Steamers and the Redwood Valley Railroad for special events parking.

The areas of the Corporation Yard remaining after structures and asphalt have been removed will be reclaimed as open space.

b. Bald Peak (Vollmer Peak)

Background:

At Vollmer Peak, the District has a communications facility that it shares with 4 other public agencies. An adjacent facility is privately owned and has over 20 tenants. The District provides fence security and building maintenance for its tenants. All users pay fees to cover District road maintenance. Current District tenant contracts expire by the year 2000.

Issues:

The communication towers and fences are visually intrusive within Tilden Park.

Policy:

To minimize the visual intrusion of the buildings, fences, and towers associated with telecommunications as viewed from within the Park and from surrounding areas.

Required Action:

The District will negotiate with the other communication site owners to consolidate all facilities on Bald (Vollmer) Peak into one mostly underground structure and a single tower. Chainlink fencing will be removed and microwave dishes will be mounted in side hill locations (if feasible). All facility exterior colors and materials will be compatible with parklands.

6. Utilities

Background:

Water

Tilden Park is supplied with water from East Bay Municipal Utility District lines at specific points within the Park. (See Figure 14.)

No water is available on the eastern side of the Park. Inspiration Point, located on the east side of the Park, is a major trailhead to Nimitz Way, a popular year-round trail. Runners, walkers, and cyclists have frequently requested drinking fountains at Inspiration Point.

Electricity and Phone

Overhead electric and telephone lines serve the major facilities including the Little Train, the Golf Course, the Brazil Building, the Botanic Garden, the Merry-Go-Round, and the Pony Ride with an underground telephone line along Shasta Road to the Brazil Building. The EEC is served by underground electric and overhead phone lines along Beloit Avenue.

Gas

The Golf Course clubhouse is served by a natural gas pipeline from Summit Drive. Other major facilities have refillable propane gas tanks.

Sewage

The City of Berkeley operates a sewer line along Wildcat Canyon Road from the city limits to Spruce Street to serve the west slope of the hills. This collector ultimately ties into the Stege Sanitary District facilities. Sewage from the Golf Course and Brazil Building area feeds into the city line. A lift station at Lake Anza pumps sewage uphill to tie in with the city line.

The Merry-Go-Round, Corporation Yard and Jewel Lake restrooms have leach fields. All other sanitary facilities are either chemical toilets or subsurface holding tanks which are periodically pumped out and discharged into a sewage treatment plant.

Issues:

The holding tanks at the Environmental Education Center and the Little Farm are inadequate for the frequent use they receive. Septic discharge sometimes creates pollution problems in Wildcat Creek.

Overhead power lines interfere with the viewshed in Tilden Park.

Policy:

To provide adequate utilities to serve all major facilities.

Required Actions:

Water Systems Renovations

The District will install fire hydrants of practical design at all appropriate locations where suitable water mains cross roads near Park facilities.



Figure 14

UTILITIES

0' 1500'



LEGEND

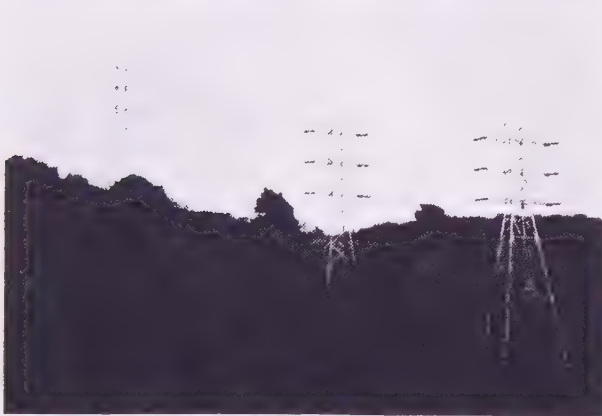
- water line
- sewer line

The District will replace deteriorated and/or undersized water mains with those of sufficient size to supply anticipated fire flows and to provide adequate supplies at all major facilities.

Renovation of EEC and Little Farm Sewage System

The District will remove the existing Little Farm flush toilets and renovate the entire sewage system to accommodate frequent visitor use.

Underground All Electric Utility and Phone Lines



As funding becomes available, the District will underground all powerlines where possible to mitigate their visual impact within Tilden Park.

The District will remove utility lines that are not in use and will consider serving the utility needs of the Corporation Yard from the Orinda side of San Pablo Ridge.

7. Quarry

Background:

A Quarry is located in Tilden Park at the south end of Quarry Trail above South Park Drive and slightly north of Big Springs picnic area. It is not highly visible from park roads or facilities. The approximately 1/2 acre Quarry site has served Tilden Park since the 1930's when Civilian Conservation Corps (CCC) workers used native volcanic stone from the Quarry to build signs, drinking fountains, restrooms and drainage structures. The Quarry has not been heavily used since that time and its infrequent use does not conflict with park operations or visitors. The Quarry was used in 1985 to restore the CCC-built restrooms throughout Tilden. Park staff continues to use quarry stone for minor projects such as rebuilding culverts, retaining walls and barbecue pits.

Issue:

There is a need to assess the feasibility of compatible Quarry land use within the setting of Tilden Park.

Policy:

The District will continue to use material from the Quarry occasionally on an as-needed project basis until such time it is decided that this facility is no longer needed or becomes incompatible with other park uses.

Required Actions:

Quarry stone will continue to be used for small scale projects (e.g., repairs to existing structures within Tilden Park) on an as needed basis using only hand labor and small tools. When the existing quarried stone has been utilized, the District will discontinue use of the quarry.

A closure plan will be prepared for reclaiming the quarried areas. Finished contours and fill estimates will be made for regrading steep banks to more gentle slopes.

8. Facility Names

Currently used facility names are found in park brochures published by the East Bay Regional Park District Public Affairs Department and currently used feature names are found in the Wildcat Canyon/Tilden Regional Parks Resource Analysis.

The following new facility names are is used in the Land Use-Development Plan.

The new reserve group picnic area will be named the Anza View Picnic Area.

The trail presently known as the Sweetbriar Trail will be returned to its original name, the Meadows Canyon Trail. This name change is in response to strong sentiment of many park visitors who recall the original name of Meadows Canyon Trail before research of the area in 1975 indicated that a dairy named Sweetbriar had been located at the canyon south of Jewel Lake. Meadows Canyon will be the name of the trail running east-west between Meadows playfield and Inspiration Point. The canyon itself will continue to be referred to as Sweetbriar Canyon.



IV. PLANNING PROCESS

A. Purpose and Role of The East Bay Regional Park District

The East Bay Regional Park District ("EBRPD" or "District") is a State authorized special district of Contra Costa and Alameda counties. The District contains 46 parklands occupying 60,000 acres of land and 13 regional trails. The District derives its powers from State Public Resources Codes, Section 5500-5595.

The District is governed by an elected Board of Directors, responsible for providing direction to fulfill the District's role in the community and for establishing policies and objectives, as necessary, to accomplish the District's purposes.

The District's policies and objectives as described in the EBRPD Master Plan are: (1) to provide a diversified land and water system of regional parks; (2) to acquire, preserve and interpret significant examples of the natural and cultural environment; (3) to cooperate with other public agencies in developing non-park, open space lands; (4) to balance environmental concerns with regional recreation opportunities; and (5) to develop a dispersed parklands system close to the people. (See Appendix D for entire quote of Master Plan "Policies and Objectives.")

B. Regional Park Planning Guidelines

The Land Use-Development Plan directs the future use and development of a parkland based on policies established in the District's 1988 Master Plan. The Master Plan has designated Tilden Park as a "Regional Park." The Regional Park purpose and standards state:

- 1) A Regional Park provides a spacious land area with outstanding natural features and many outdoor recreation opportunities for the enjoyment and education of the public;
- 2) Be of land, or land and water, of 500 or more acres;
- 3) Have, or potentially have, a scenic or natural character in 70 percent to 90 percent of its area. The District designates this portion as a Natural Unit for planning and management purposes.
- 4) Be able to accommodate a variety of recreational activities on up to 30 percent of its area. The District designates this portion as a Recreation Unit for planning and management services.

(See Appendix F.)

C. Adopted Park Planning Reports

The Resource Analysis for Tilden Park was first accepted in 1975 and revised in 1978 and 1984. The previous Land Use-Development Plan for the Park was approved in 1964 and is titled "Forward." (See Appendix A for a description of this and earlier reports.)

D. Revisions to the Plan

This Plan is intended to serve as Tilden Park's Master Plan for the next 20 years. The Land Use-Development Plan and the EIR can be amended as needed. However, major amendments, that would include substantial changes altering the basic land use designations, roads, or resource protection measures created by the Plan, require appropriate California Environmental Quality Act (CEQA) documentation and Board approval.

Suggestions concerning amendments to the Plan should be made to the Planning Department. Development or use proposals submitted by outside individuals or groups will follow the District's application permit procedure.

E. Plan Administration and Implementation

This Plan will be implemented under the direction of the East Bay Regional Park District General Manager's Office upon adoption by the Board of Directors. If there are ownership changes or use permits required, these will be executed by the Acquisition Department to implement details of the Land Use-Development Plan. Capital Improvement Plans and contract documents shall be created and administered by the Design Department.

Maintenance of the existing and proposed facilities will be by the appropriate parkland crews, under the supervision of the Park Supervisor and Unit Managers. The Park Supervisor is responsible for seeing that maintenance is consistent with the adopted Plan. Any questions regarding this consistency will be discussed with the Planning or Land Stewardship Departments. Maintenance work on grading, drainage, trails, structures, fencing, pond, etc., and in the Special Protection Units, etc., will be performed under the direction of the appropriate Land Stewardship specialist or engineer. Any maintenance work involving design or layout changes shall be approved by the Design Department. Reservations shall be through the Reservations branch of the Operations Department and Special Interest Recreation License Agreements, Concession Agreements, and the Security Residence Agreements shall be negotiated and managed by the Revenue branch of the Operations Department.

Implementation of this Plan is expected to proceed in phases, some of which may not be undertaken for many years. This Plan is long-range and funds must be budgeted for each project. Development funds for Tilden Park will be balanced with the funding need of other District parks.

The progress of the implementation of the Plan shall be reviewed annually. This Plan is schematic or general in nature. While graphic plans show configuration for facility design and the text indicates the quality of facilities such as the number of parking spaces, these proposals are preliminary. The final design and capacities can only be determined during the creation of the Capital Improvement Plans and contract documents. The Chiefs of Planning and Design and representatives of the Operations Department shall determine priority in developing the proposed facilities requiring capital expenditures. The Operations Department will determine the priority of projects which can be implemented by park staff.

F. Plan Priorities

This Plan emphasizes the District's commitment to resource preservation and the renovation of existing facilities in order to meet the needs of park users who enjoy both recreational facilities and open space. This emphasis is reflected in the prioritization of resource protection and capital improvement projects outlined below. Measures will be taken to protect and restore wildlife habitat. Improvements to existing facilities will take priority over the development of new ones. Projects have also been ranked to achieve greater visitor safety.

Field supervisors and other staff of the Operations Department have assisted in establishing Plan priorities. Four separate supervisors oversee the operation of Tilden Park. The supervisors of Tilden, Tilden Nature Area, the Environmental Education Center and the Botanic Garden determine the budgetary and maintenance functions of their respective park areas. Each supervisor is concerned with specific immediate and long term maintenance and user needs of their area of Tilden Park. Therefore, the capital improvement projects have been organized into Tilden, Tilden Nature Area, and Botanic Garden groupings. (The EEC and Tilden Nature Area are grouped together.) Some capital improvement projects may be delayed pending the availability of development funds and labor.

Tilden

- Restore Golf Course section of Wildcat Creek
- Expand existing parking areas (Meadows, Lake Anza Equestrian Staging)

- Develop new parking areas (Botanic Garden, Brazil Building, Little Train, Lake Anza)
- Improve disabled access at Lake Anza
- Improve existing picnic areas (e.g., Laurel and Gillespie)
- Restore picnic area at Anza View
- Develop trail links and Tilden Trail
- Provide water at Inspiration Point
- Replace tennis courts with turf meadow

Tilden Nature Area

- Establish interpretive staff participation in wildlife monitoring project
- Renovate the Little Farm sewage system, barn, corrals, and restrooms
- Improve disabled access to the Little Farm, and EEC rotunda and restrooms and Junior Ranger Lodge
- Develop ponds for habitat enhancement and interpretive use
- Repair EEC and Junior Ranger Lodge foundation

Botanic Garden

- Improve Garden paths to increase wheelchair accessibility
- Relocate Garden entrance, develop parking areas, kiosk, and restrooms
- Fence Camp Oaks parking area for soil storage and staff parking
- Redesign Y to T intersection at Wildcat Canyon Road and South Park Drive

Natural Resources Management Plan

The Natural Resources Management Plan requires the implementation of ongoing, large scale projects that include the maintenance of plant and animal communities, water quality, and the prevention of wildfire, landslide and erosion hazards. It is difficult to prioritize the natural resource management plan because there are many phases to each project, with every phase contributing to the overall enhancement and protection of natural resources in Tilden Park.

However, the following projects will be initiated as first steps towards improving the natural resources management of Tilden Park:

- Complete watershed study of Wildcat Creek
- Implement wildlife monitoring program
- Restore riparian habitat along the Golf Course and other sections of Wildcat Creek
- Initiate research on the impact of road crossing mortality on newt populations and protection measures
- Plant fuelbreak screen for habitat and visual value.





V. ENVIRONMENTAL IMPACT REPORT

The Tilden Land Use Development Plan includes both development and resource management policies and required actions to guide land use and management in Tilden Regional Park. A summary map is shown on page 9 (Figure 2) with a project location map on page 13 (Figure 3).

Other agencies may need to use this document for making permitting decisions or as part of their municipal planning processes. Such agencies include: the State Department of Fish and Game, and the Counties of Contra Costa and Alameda.

A. Summary

The project includes a Land Use-Development Plan (LUDP) and a Natural Resources Management Plan (NRMP) for Tilden Regional Park. The LUDP provides for the development of new, and the expansion of existing, parking areas; the development of a new trail and new trail links; the development of an equestrian staging area; the development of four new ponds; the development of one new picnic facility; and the removal of the District-wide Corporation Yard. The NRMP includes guidance for vegetation management practices (e.g., prescribed burning, establishment of indigenous plant associations), erosion control practices and water quality maintenance.

The LUDP and NRMP were designed to avoid and/or mitigate adverse environmental impacts where consistent with meeting stated objectives. The EIR outlines a variety of mitigation measures for erosion control, water quality maintenance and traffic safety which have been incorporated into the project. Aside from the no project alternative, no environmentally superior alternative to the proposed project was identified.

Impacts related to increased erosion, runoff and sedimentation; water quality degradation; loss of habitat; landslide damage; air quality degradation; and, traffic and noise concerns are all addressed in the EIR with mitigation measures provided within the NRMP. With the exception of earthquake related impacts/risks and the possible damage to resources from the loss of control of a prescribed fire, all impacts have been reduced to less than significant levels.

B. Bio-physical Environment

1. Geology, Soils and Seismicity

Setting

The dominant topographic features of the area are San Pablo Ridge to the east, the crestline of the Berkeley Hills to the west, with Wildcat

Canyon in between. The complex geologic history of the area has resulted in several striking landforms and undulating ridgelines. Elevations range from 1,913 feet at Vollmer Peak to about 500 feet along Wildcat Creek.

Wildcat Canyon is relatively broad and gently sloping in some areas, narrow and gorge-like in others. Tributaries have created numerous side canyons. Most of the parkland is steep and rugged. The rugged topography is covered with a mosaic of primarily naturalized vegetation. Flat or gently sloping land suitable for intensive recreation totals about 120 acres; much of which is already developed.

Bedrock in Tilden Park is primarily of Tertiary origin (3 to 65 million years old), and is predominantly comprised of non-marine sedimentary rock of the Orinda formation (part of the Contra Costa group), and volcanic rock of the Moraga formation. Additionally, Quarternary (2 million years old) sediments of alluvium occur in the valley bottom. The portions of the Contra Costa group which consist of sandstone, siltstone, and conglomerate, include significant amounts of clay materials, particularly montmorillonite, resulting in an incompetent bedrock (Kachadoorian, 1956; Radbruch and Weiler, 1963).

The bedrock has been uplifted, folded and, in places, sheared by tectonic forces. The area would most likely be subject to severe seismic shaking in the event of a major earthquake on nearby traces of the Hayward fault (0.25 miles west of the Park) or the San Andreas fault (15 miles west of the Park). Additionally, the northern end of the Wildcat fault in nearby Wildcat Park has been mapped as active.

The weak and broken nature of the bedrock, combined with a Mediterranean-type climate and periodic severe seismic shaking, provide conditions that are conducive to bedrock landslides and soil failures. Numerous areas of the Park have been mapped as having landslides (Nilson, 1975). It is likely that unmapped landslides also exist.

The proximity of active faults presents a high potential for threats to the integrity of all man-made structures; of special interest is the possibility of a seismicly-induced failure of the Lake Anza Dam. Such a failure would require prompt emergency action (within 30 minutes) to block off U. S. Interstate 80 in both directions and to evacuate Riverside School and adjacent homes (O'Neil, n.d.). If such an evacuation is not promptly accomplished, a substantial loss of life could occur, along with the damage resulting from the inundation following the Dam's failure. It is also likely that severe seismic shaking could increase landslide activity.

The soils are generally shallow (less than 30 inches deep) and slightly to moderately acidic with moderate to high erosion potential. Soils include loams and clay loams of the Gilroy, Milshom, Los Gatos and Lodo series. There are smaller areas of loam and silty clay loam from the Tiera and Zamora series. The soils vary from low to high shrink/swell potential, and are moderately to highly corrosive to uncoated steel.

Impacts

The LUDP designates new parking areas and calls for the expansion of other existing parking facilities. In general, the grading involved at each site would be modest (see Table 3). In all but three instances, the cut and fill would be balanced on-site. One exception is Laurel Canyon where approximately 5,000 cubic yards of material would be removed and transported off site. Additionally, the development of a new parking area at Inspiration Point would necessitate the importation of approximately 1,500 cubic yards of material. The reshaping of the Golf Course driving range would entail on-site grading of approximately 80,000 cubic yards of material, with an additional 20,000 cubic yards to be imported.

The LUDP includes provision for a new holding tank or leach field to be constructed in the Little Farm area to contain wastes on site. The total amount of grading required will not exceed 500 cubic yards and will be balanced on site.

The LUDP provides for the continuation of quarrying activities at the existing quarry site near Big Springs. Active quarrying would be limited to hand removal of small, loose materials. The resulting topography would continue to pose safety concerns until such time as a quarry closure plan is designed and implemented.

The LUDP also calls for a track extension for the Golden Gate Live Steamers and the construction of new trail links, both of which would require a modest amount of grading. The Tilden Trail, the largest trail project covered within the LUDP, would require no grading or tree removal, merely clearing of understory.

The NRMP includes the dredging of Jewel Lake which would require considerable grading (ca. 6,500 cubic yards). The Jewel Lake project would require periodic maintenance dredging of perhaps up to 3,500 cubic yards of material due to upstream sediment deposition. Water and sediment would be pumped to a spoils site approximately 2,000 feet north of the Lake with a second pump returning the filtered water to the Lake, leaving sediment at the spoils site. This dewatering basin would contain the sediment and would eventually be graded to blend in with the adjacent topography and would be seeded to establish a ground cover. It is not possible to say with any certainty how often maintenance dredging will be required due to seasonal climatic variations. However, it is safe to assume that maintenance dredging will be required a minimum of one time during the life of this plan.

The NRMP also provides for the thinning of tree stands which would involve some soil disturbance. Fuelbreak construction and maintenance would also result in soil exposure, posing additional potential erosion problems; its affects on slope stability are currently being addressed in a study being conducted by a consultant.

TABLE 3
GRADING ESTIMATES

<u>Location</u>	<u>Amount (in cubic yards)</u>
Golf Course	100, 000
Laurel Canyon	5, 000
Brazil Building Parking	4, 700
CNPS Growing Ground	3, 000
Little Train Overflow	2, 500
Buckeye Parking	2, 500
Quarry Parking	800
Botanic Garden Parking	550
Little Farm	500
Anza Dirt Overflow	300
Steam Train Track Extension	200
Blue Gum Pond Construction	60
Upper Botanic Garden Ponds	30
EEC Pond Construction	25
TOTAL	120, 165
Jewel Lake Dredging - initial	6, 500
- ongoing/periodic*	3, 500
TOTAL	130, 165*

*This LUDP is intended to serve the Park for approximately 20 years. It is impossible to determine how many times maintenance dredging of Jewel Lake will occur during the time-frame of the LUDP and, thus, how many total cubic yards of material will actually be removed.

The LUDP includes the development of a growing ground for the California Native Plant Society (CNPS). This would require grading of approximately 3,000 cubic yards of material to provide a flat area on which to erect a building which will serve as an office and potting shed, with outside terraced areas provided for plantings.

Increases in erosion would occur at all graded sites for the first one or two rainy seasons regardless of revegetation efforts. If the silt were not contained in siltation structures, it would contribute to the siltation problems in lower Wildcat Creek.

The placement of weirs, gabions and gravels in the Wildcat Creek channel has the potential to cause bank failures elsewhere in the channel if improperly placed.

Continued landslide movement will occur with or without the project. Project activities could increase the potential somewhat. Landslide movement could potentially impact utilities and structures, as well as contribute sediments to water courses and closing roadways.

The two faults proximate to Tilden Park pose an ever present earthquake threat. Earthquake damage which could occur would include landslides blocking or damaging roads, trails and Wildcat Creek; rupture of water and sewer lines; loss of electrical power; downed electrical transmission lines; possible secondary fires; failure of the Lake Anza and Jewel Lake dams; and the release of unconsolidated materials from the dredge spoils site. Dredge spoils released due to seismic shaking or landsliding could cause significant sedimentation of Wildcat Creek. The rupture of the Anza dam could result in inundation in the community of Richmond where loss of life could also result. The possible rupture of sewer lines could result in sewage entering Wildcat Creek. Seismic shaking could also result in the collapse of structures, resulting in injuries or loss of life if they were occupied.

Mitigation

Proposed as part of the project

- The District will limit wet season construction.
- The District will minimize construction of facilities on existing landslides and unstable slopes.
- The District will require the implementation of erosion control measures (e.g., outslipping, gabions, check dams, catchment basins, energy dissipators, erosion fabric, seeding) at all graded sites upon project completion and prior to the winter rainy season.
- The District will incorporate erosion control plans as part of all capital improvement projects which involve grading or other activities which expose the soil, and as part of its tree removal projects.

- The District will continue staff training in erosion control.
- District Water Management staff will work with the District's Geologist to ensure the proper placement of weirs, gabions and gravels in the Wildcat Creek channel.
- The District will require the implementation of erosion control measures at the Golf Course Driving Range to reduce the potential erosion and sedimentation impacts associated with the large scale grading planned there. Measures will include: piping of the existing drainage below the driving platforms to repair the gulying occurring there; using the existing pond at the end of this drainage as a desilting basin to trap sediments before they reach the Creek; seeding and placement of erosion control fabric upon project completion; and, the completion of project construction prior to the winter rainy season.
- The District will obtain a geotechnical evaluation of the structural integrity of the Lake Anza and Jewel Lake dams and will make any necessary repairs.
- The District will comply with the maintenance requirements prescribed by the State Division of Safety of Dams, such as prevention of the growth of woody species and large accumulations of tules and cattails and the control of rodent damage, to protect the surface integrity of the dams. Vegetation removal and rodent control practices will be consistent with the Integrated Pest Management program and policies.
- The District will review the structural integrity of any structure along Wildcat Creek that straddles the Wildcat fault and make repairs or replacements as warranted.
- The District will provide flexible connections for all utilities crossing faults in order to minimize potential ruptures and leaks (e.g., sewage) in the event of an earthquake.
- The District will work with the city, counties and private landowners to mitigate runoff conditions that contribute to landslide movement.
- The District will conduct a reconnaissance at major slide sites during winter months in order to undertake any necessary remedial action at the earliest possible time.
- The large eucalyptus trees adjacent to the CNPS growing ground site will be retained for soil stability purposes.
- The District will work with the City of Berkeley to design and install a retaining structure below Wildcat Canyon Road (above Lake Anza) in an attempt to stabilize the Lake Anza slide, thereby preventing further risk to Wildcat Canyon Road.

Identified but not proposed

- The District could discontinue use of the quarry site and, as part of the quarry closure plan, recontour the site, thereby providing a safer topography.

2. Hydrology and Water Quality

Setting

Tilden Park occupies the upper reaches of the Wildcat Creek watershed. The upper 5 miles of the Creek have a permanent water flow and receive water from several springs. There are 2 major and several minor lakes and ponds in the Park. The major lakes are Lake Anza and Jewel Lake.

Lake Anza was built in 1938 as a water source for the irrigation of the Golf Course and as a recreation resource. It is no longer used as a water supply. Recreation facilities have been developed along the Lake's western shore. Lake Anza occupies about 10 acres, and contains between 250 and 350 acre-feet of water (California Department of Water Resources, 1976). The reservoir is drawn down a few feet each year in anticipation of winter rains. The water in Lake Anza is well supplied with nutrients and free from detectable pesticides. During the summer, the water becomes thermally stratified; although the surface water is relatively warm (60 to 70 degrees F), with dissolved oxygen dropping from over 7 parts per million at the surface to near zero in the lower layers of the Lake. The water of the Lake is alkaline (ranging from a pH of 7.5 to 8.7 seasonally) (EBRPD, unpublished data). These water conditions are conducive to seasonal "blooms" of aquatic plants, most notably the blue-green algae. Generally, on one or two occasions per year, these blooms become great enough to require treatment with an algicide (copper sulfate) to maintain a water quality suitable for body-contact water sports.

Jewel Lake was built in 1921 as a public water supply, but was used for this purpose for only 5 years. By 1956, Jewel Lake was almost completely filled in with silt, and in 1962 was dredged to a maximum depth of 12 feet. By 1978, it had filled to a maximum depth of 6 feet. The Lake occupies about 0.5 acres and contains approximately 5 acre-feet of water year-round (ibid). No water quality data is available for Jewel Lake; however, indications are that the water is relatively warm (60 to 70 degrees F), well oxygenated and rich in nutrients.

The other ponds are each less than one acre in area and contain less the 6 acre-feet of water combined. The quality of the water in them is not monitored. They are used as part of the Golf Course and for wildlife habitat enhancement purposes.

Wildcat Creek, as it flows through the Park, has a well-developed riparian over-story and a bottom characterized by large rocks and cobbles with silt and sand between. The Creek's water is close to

neutral (pH 7.7), well oxygenated (about 8.2 parts per million), and relatively warm (in the summer about 65 to 70 degrees F) (EBRPD, unpublished data).

The portion of Tilden Park near the Botanic Garden has been used as a water well field. A total of 8 wells supplied domestic water for the Berkeley area from 1890 to 1919. A recent investigation of one of the wells indicated that it is capable of producing approximately 10-20 gpm of water.

Impacts

Construction of new parking areas, the CNPS growing ground and new trail links, would contribute to erosion for the first one or two rainy seasons subsequent to construction, and would adversely affect the water quality of Wildcat Creek and Lake Anza. Improperly managed goat grazing and tree thinning and removal activities would also result in adverse water quality impacts. Oil and fuel from parking areas adjacent to water courses could also degrade water quality. Additionally, polluted runoff from Wildcat Canyon and Grizzly Peak roads, and storm drain outfalls, would continue to contribute to the degradation of water quality in the Park. The removal of vehicle maintenance operations at the Corporation Yard site would mitigate these impacts somewhat.

Runoff from park facilities, especially the Little Farm, Pony Ride and Golf Course, would continue to contribute pollutants to Wildcat Creek. Expansion of the Pony Ride facility could increase this impact.

In the event of a major earthquake, ruptured sewer lines could result in the pollution of Wildcat Creek. Lake Anza and Jewel Lake dams could also fail during an earthquake, potentially causing stream degradation and high velocity water flows, and could result in loss of life.

Horse, pedestrian and bicycle use on trails would continue to contribute to erosion resulting in seasonal sedimentation of adjacent water courses. Unpaved roads are also contributors.

Although the LUDP would result in the relocation of the existing Little Farm toilets adjacent to the Environmental Education Center (EEC) to tie into the larger septic tank at the EEC, occasional overflow of both would still occur, although with less frequency. Holding tanks require the periodic removal of tank contents. Although one can estimate how often the tanks will require pumping, occasional unanticipated high use may require earlier pumping than expected, potentially resulting in tank overflow when this earlier need can neither be anticipated nor met.

Continued applications of copper sulfate in Lake Anza may result in excessive accumulations, necessitating the implementation of other management strategies to deal with the algae bloom problem.

Mitigation

Proposed as part of the project

- The District will require erosion control practices as part of all capital improvement grading and ground exposure activities.
- CNPS will comply with the District's Integrated Pest Management program.
- The District will restrict grading and ground exposure activities in wet weather.
- Through proper trail siting and signing, the District will restrict vehicular, horse, foot and bicycle traffic from entering riparian zones in order to prevent erosion and resultant sedimentation.
- The District will install and maintain drainage and erosion prevention devices along trails and roadways. Annual inspection and maintenance will occur prior to the rainy season.
- Park staff will monitor trail conditions during winter months along Wildcat Creek and its tributaries. Trails will be closed to equestrian, bicycle and/or hiker use if erosion and/or soil problems warrant.
- By the use of sumps and septic tanks and the repair of existing drainage facilities, the District will prevent the uncontrolled flow of water and hazardous substances from potential pollution sources, such as the Little Farm, the Corporation Yard, urban storm drains and other sources.
- The District will continue to regulate pesticide use in the Park.
- Erosion control methods (e.g., outsloping of trails and service roads, water bars, gabions, check dams, energy dissipators, erosion fabric) will be implemented to control erosion at identified problem sites, and will be regularly checked and maintained by park staff.
- The District will install storm drains and catchment basins, to contain runoff of pollutants, where determined necessary by the District's Water Management Specialist.
- The District will work with the City of Berkeley (and Contra Costa and Alameda counties) to develop and install systems to convey storm runoff into urban storm drains along the western park boundary.
- The District will seed erosion prone areas by hydroseeding, seed drilling or hand methods prior to the winter rainy season. Additional surface protection (e.g., straw, erosion fabric) will also be provided.

- Goat grazing for vegetation management purposes will be supervised by the District's Range Management Specialist and will be carried out as part of the District's grazing program. Reseeding of grazed areas will occur prior to the winter rainy season.
- Tree removal activity will be designed and supervised by the District's Land Management Specialist in accordance with the provisions of a plan appropriate to the characteristics of the site.

Identified but not proposed

None.

3. Air Quality

Setting

Tilden Park has a Mediterranean climate; cool, wet winters and warm, dry summers. The summer heat is moderated by the influence of coastal fog. When warm temperatures persist in the inland valleys for several days, a local low pressure area is created. This draws the cool coastal fog inland to Tilden Park where its persistence from late evening until late morning acts to limit daytime high temperatures. In the winter, the daily high temperatures are in the mid-50's (degrees F), while evening lows are in the low 40's; frost is rare. In the summer, the daily high temperatures are in the mid-70's while evening lows are in the mid-60's.

Winds come predominantly from the west, except during winter storms. Typical summer wind patterns are calm in the mornings, with evening breezes of up to 15 to 20 miles per hour and calm returning at night. The occasional occurrence of east winds in the early fall when forest detritus is quite dry, can result in an increased wildfire risk. During the winter, huge cyclonic storms come off the Pacific Ocean. These are generally accompanied by one or more days of southerly winds caused by the counterclockwise circulation of the storms.

Precipitation occurs almost exclusively as rainfall; snow and hail are rare. About 90 percent of this precipitation occurs between November and March. Precipitation ranges from approximately 22 to 24 inches per year (Rantz, 1971). Some of the plants in the area are able to supplement this rainfall by condensing moisture from the summer fog and/or by absorbing it directly from the air. Air pollution may tend to make local rainfall acidic; however, there is no data to document this. Lake Anza measures slightly alkaline (pH 7.5 to 8.7), indicating that any such effect is not yet significant.

Although no measurements have been taken, air quality in Tilden Park is assumed to experience occasional violations of State and Federal Air Quality Standards for oxidants, a region-wide problem.

Impacts

The NRMP provides for the use of prescribed fire as a vegetation management tool. Primary emissions from prescribed fires are nitrogen, carbon dioxide and particulates. There may also be emissions of volatile oils from eucalyptus, poison oak and other plants as they are burned. The oxides of nitrogen and particulate emissions have the potential to contribute to region-wide air quality violations, and may result in local violations of standards set for individual pollutants in and around the burn site. The emissions of volatile oils could present a health risk to exposed individuals allergic to them. For these reasons, prescribed fires are regulated by State and Regional Air Quality Management Districts. To reduce the likelihood of violations of air quality standards, such fires are restricted to days when the predicted weather pattern provides good mixing of the upper and lower atmospheres.

Short-term violations of particulate standards could occur as a result of grading activities associated with the construction and expansion of staging areas, trail construction, pond development and other construction activities. The thinning of eucalyptus trees in some areas could result in a limited short-term increase in particulate (dust) emissions from tree cutting and vehicular access to the site; fuelbreak construction could also contribute. These would result in short-term, non-significant impacts.

Mitigation

Proposed as part of the project

- The District will conduct prescribed burning operations in accordance with the regulations of the State and Regional Air Quality Management Districts.
- The District will require the implementation of erosion control practices at all sites where grading or soil exposure occurs.

Identified but not proposed

None.

4. Biology

Setting

Major grassland areas occur on the upper, south and west-facing slopes of San Pablo Ridge. The grassland consists primarily of non-native annual species, such as wild oats, barley and bromes. Some areas also contain stands of native grasses, particularly the rockier sites. Needlegrass, meadow barley and creeping wild rye are the most common natives. Native wildflowers in the Park are diverse and abundant; species include the California poppy, lupine, wild hyacinth, buttercup and mallow.

The predominance of non-native grasses results from the introduction of European cattle in the 1700's. The preferential grazing pressure upon California's native perennial bunch-grasses led to a substantial reduction of their extent in the Park and to a predominance of annual grasses, especially the European grasses which were accidentally introduced along with the cattle. About 200 years after the introduction of cattle, the land was acquired as a regional parkland and cattle were removed (in the mid-1930's); with the elimination of grazing pressure, coyote brush began to actively invade the grasslands. Additionally, extensive plantations of eucalyptus trees were planted in grassland portions of the Park starting about 1910 (EBRPD, 1984).

Major brushland areas occur on the northeast-facing slopes of the Berkeley Hills and San Pablo Ridge. The brushland consists of such species as coffeeberry, thimbleberry, ninebark, rose, ocean spray, osoberry, toyon, currant, blueblossom, elderberry, coyote brush and monkeyflower. In the drier, south- and west-facing sites, the brushland includes stands of coyote brush, sagebrush and monkeyflower.

The brushland is subject, and adapted to, the periodic occurrence of wildfires. Such fires consume the standing dead branches of brushy plants, releasing their nutrients to the soil, thereby creating soil conditions conducive to seed germination of brushland plants. Some of these seeds cannot germinate until they have been exposed to the heat and soil conditions associated with these periodic fires (EBRPD, 1984). In the years before humans arrived in California, these fires occurred spontaneously as a result of lightning. When prehistoric humans arrived, they developed various hunting and gathering practices involving the deliberate setting of fires in the grassland, brushland and other vegetative associations. The early Spanish cattle-herders continued some of these practices. In the past 50 to 100 years, humans have actively suppressed wildfires. The result has been an accumulation of standing, dead branches which (in some older stands of brushlands) would result in wildfires of a much greater intensity than would occur under a more regular, periodic burning regime.

Major areas of mixed-broadleaf forest occur on the lower slopes of Wildcat Canyon and the northwest-facing draws of San Pablo Ridge. The trees in this forest include coast live oak, bay and madrone, with maple and buckeye present in smaller numbers. Under the trees there is a rich shrub and herbaceous layer. Shrubs include poison oak, blackberry and hazelnut. Common herbs include Solomon's seal, fairy bells, woodland star, alum root, angelica, sword fern and wood fern. This association has high wildlife habitat value, providing forage, cover and breeding sites.

Eucalyptus plantations are present on the ridges north of Laurel and Sweetbriar Canyons, and on the ridges east and south of Lake Anza. This plant association consists of blue gum and red gum eucalyptus, with an understory of shrubs and native evergreens similar to that found in the mixed-broadleaf forest.

Eucalyptus trees produce a large volume of litter on the forest floor, including leaves, branches and long shreds of bark. This non-native plant material is not as susceptible to native decomposers as is native plant material and, therefore, does not rapidly decompose. The result has been plant litter accumulations of up to 40 tons per acre (this is the weight equivalent of approximately 16 cords of firewood). Under such circumstances, a wildfire would be severe and uncontrollable (Fenwick, 1980).

Other non-indigenous plants in Tilden Park include memorial grove plantings of Monterey pine, giant sequoia, Douglas fir and incense cedar. Ponderosa pine has also been planted in some areas. Additionally, orchard and landscaping vegetation persists at several historic ranch headquarter sites. These plantings include a variety of species, including acacia, Russian olive, date palm and eucalyptus. Records in the Botanic Garden indicate that thousands of non-indigenous plants from all parts of California have been planted in various localities throughout Tilden Park as part of erosion control efforts of the late 1930's. A variety of landscaping plants have become established in portions of the Park as a result of their spread from adjacent landscaped areas. The primary area affected is along the Berkeley Hills and along Wildcat Canyon Road. These plants include Scotch broom, French broom, acacia, German ivy, English ivy and pampas grass.

Riparian woodland occupies the streambanks of Wildcat Creek and the lower portions of its tributaries. It includes arroyo willow, yellow willow, white alder and an understory of shrubs, including poison oak, blackberry, ninebark, dogwood, twinberry and elderberry.

Aquatic and emergent vegetation occurs more or less regularly around the shorelines of Lake Anza, Jewel Lake and the other ponds in the Park. Cattails are the most common emergent plants, along with bullrushes and sedges. Algae, especially blue-green algae, occurs throughout these lakes and ponds.

The Botanic Garden occupies about 7 acres along the banks of Wildcat Creek just north of Wildcat Canyon Road. The Garden includes thousands of plants, including trees, shrubs and herbs from every floristic province in California. The Garden includes dozens of plants which are candidates for official protection as either threatened or endangered.

One endangered plant, the Alameda manzanita, has been planted in the Park; this plant has been classified as endangered under the California Native Plant Protection Act. The Alameda manzanita (Arctostaphylos pallida) is a shrub whose range is limited to the East Bay Hills in Alameda and Contra Costa Counties. This plant has been planted in the roadbanks along Shasta Road in Tilden Park and is successfully reproducing there.

The following 3 plants in the Park that have been listed as rare by the California Native Plant Society (Smith, et al., 1984) but have not received official protection under State or Federal law:

- a. The Oakland mariposa (Calochortus umbellatus) occurs in the Nature Area about 150 yards north of the EEC.
- b. The rock daisy (Erigeron petrophilus) occurs in Wildcat Gorge.
- c. The white fritillary (Fritillaria liliacea) occurs along the Berkeley Hills north of Canon Drive.

The diversity and intermixing of plant associations provides productive wildlife habitat. Water is available year-round at Lake Anza and Jewel Lake, as well as along Wildcat Creek. There are also numerous springs. The mixed-broadleaf forest and brushlands support the greatest number of animals, because of their many food sources and available cover. The grasslands are important as habitat for rodents and their predators, such as hawks and owls.

The mammals found in the Park include raccoon, opossum, bobcat, coyote, long-tailed weasel, pocket gopher, deer mouse, black-tailed jackrabbit, fox and black-tailed deer. Domestic horses are kept at the Pony Ride area and are often brought to the Park from nearby privately operated stables or by trailer. A variety of domestic farm animals, including cattle, goats, chicken, rabbits and swine, are kept at the Little Farm. Domestic dogs, cats and rabbits are found roaming free in the Park.

Feral cats occupy habitats throughout much of the Park where they are presumed to feed upon small animals such as lizards, mice and ground-nesting birds. A number of these animals are living in the vicinity of the Environmental Education Center where they apparently are regularly fed by park users. These animals can inflict serious injury with their teeth and claws. They are also capable of transmitting diseases, such as rabies, to humans, and feline distemper to pets of park users and park neighbors. The domestic dogs which have been observed roaming the Park appear to be pets from adjacent neighborhoods. Although these animals may not be feral, they harass and occasionally kill wildlife in the Park. The domestic rabbits which have been observed in Tilden Park are abandoned pets. It is not clear whether they have begun to reproduce and, therefore, have become feral.

Birds include a variety of raptors such as red-tailed hawk, sparrow hawk and golden eagle. There are several bird species associated with aquatic habitats, including mallard duck and American coot. Among the songbirds in the Park are the horned lark, scrub jay, chestnut-backed chickadee, bushtit, northern mockingbird, American robin, song sparrow, western meadowlark and American goldfinch. Many migratory birds also use Tilden Park, including barn swallow, cedar waxwing, solitary vireo, Macgillivray's warbler and purple finch. At Lake Anza and Jewel Lake there are a number of domestic ducks and geese present.

Domestic geese are capable of inflicting painful wounds with their beaks. Both domestic ducks and geese are capable of harboring avian cholera, which could be transmitted to wild migratory waterfowl using these lakes.

Reptiles and amphibians include the western fence lizard, northern alligator lizard, gopher snake, Alameda whipsnake, Pacific rattlesnake, Pacific treefrog, red-legged frog, California newt and western pond turtle.

The insects and invertebrates of the Park are diverse and abundant. There has been no systematic attempt to survey or identify them. There is a potential for certain common insects to conflict with park users. Ants, yellowjackets and bees can be annoying if present in campground and picnic areas. The tree-hole mosquito is found in the mixed-broadleaf forests of Tilden Park and is capable of transmitting a parasite of dogs called heartworm. There is no effective pest control method to control this mosquito (Dr. D. Sanders 1983, personal communication).

The aquatic animals of the Park are found primarily in Lake Anza and Jewel Lake with some species also found in Wildcat Creek. Among the planktonic animals are species of the rotifers, copepods and cladocerans. Among the gamefish present are rainbow trout, catfish, largemouth bass, bluegill and black crappie. Notable among these, are native steelhead, which have not hybridized with the hatchery trout commonly planted by the California Department of Fish and Game. These unusual fish have recently been transplanted from their native Redwood Creek (where they are landlocked) to Wildcat Creek in an attempt to reestablish an ocean-run population. Among the non-game fish are golden shiner, goldfish, mosquito fish and carp.

Lake Anza supports a small warm-water fishery consisting of introduced species which reproduce rapidly enough to replace losses to fishermen.

There is one officially protected animal resident in Tilden Park; the Alameda (striped racer) whipsnake (Masticophis lateralis euryxanthus). This animal is protected as "threatened" under the California Endangered Species Act. This snake has been noted most often in brushland areas which have rocky and grassy openings. The only study of this animal, which included diet items, indicated that western fence lizards are a primary food (Hammerson, 1979).

Impacts

The NRMP would institute a number of changes in vegetation and habitat management practices. Undesirable impacts associated with some practices could occur if methods employed were mismanaged. Possible impacts are discussed below.

The most significant potential for adverse impacts would be if one of the fires set to reduce excess fuel loads were to escape "control." This

is most likely to occur if an unforeseen change in weather were to occur after the fire had been set. A worst-case occurrence would be if a prescribed fire crossed the fuelbreak established along the Park's western edge and spread into adjacent residential areas. Under such circumstances, the "escaped" prescribed fire would not only cause significant damage to park vegetation and wildlife, but could also result in the loss of private property and personal injury and/or death. The circumstances of the escape of a prescribed fire may be beyond control or mitigation. However, once a prescribed fire program is established, the areas adjacent to any particular prescribed fire site would probably have been burned in recent years, resulting in low fuel loads and attendant low fire risk. Thus, the greatest danger of escape occurs in the first few years of burning when the fuel accumulations resulting from many years of fire suppression have not yet been removed.

Tree thinning and removal could result in increased erosion and sedimentation, potentially affecting fish in streams and lakes downhill from such activities. Sewage leaks and chemical laden runoff could also negatively affect water quality and fisheries.

If goat grazing were mismanaged, there could be increased erosion and sedimentation, potentially affecting water quality and fisheries in Park streams and lakes.

Construction of a new trail and new trail links, and new and expanded parking areas, would result in the loss of some vegetation, primarily herbs and shrubs, with modest tree removal occurring in some areas. The exact acreages of each cannot be estimated without specific capital improvement plans. Such construction would result in short-term increases in soil erosion and stream and lake sedimentation, potentially adversely affecting stream and lake fisheries, as would the grading activities required to repair the gulying of Laurel Creek.

No development would occur in portions of Tilden known to support plants and animals which are officially protected as endangered or threatened or that are proposed for such protection. The use of prescribed fire would likely improve grassland and brushland habitat and would not significantly, adversely affect the Alameda whipsnake. Grass and brushland plants are well adapted to periodic fire. Prescribed fires would be restricted to the late autumn and early winter months when there have been several days when the temperature has not risen above 68 degrees F (20 degrees C) to assure that the snakes are inactive in their underground burrows (McGinnis, 1988; Greene, 1988; Brade, 1988). Thus, while individuals may be killed during prescribed fires, there most likely will remain a sufficient number of survivors for the species to persist in the area. The overall impact to the Alameda whipsnake will be beneficial in that its habitat will be improved.

Mitigation

Proposed as part of the project

- The District will install erosion control devices to minimize erosion and sedimentation which could affect water quality and fisheries.
- The District will retain the fuelbreak. This area will be maintained free of eucalyptus, with regular grassland maintenance via goat grazing, mowing or prescribed fire, occurring as necessary. Goat grazing will be supervised by the District's Range Management Specialist with reseedling of grazed areas to occur before the winter rains.
- District staff will continue to determine the range and habitat requirements of the jeopardized animals which can and do live in Tilden Park, and will modify park management, as appropriate, to foster and protect them.
- In areas of suitable habitat for the Alameda whipsnake, prescribed burning will be limited to the autumn and early winter after several days of cool temperatures (below 68 degrees F) to assure that the snakes are inactive and in their burrows.
- District staff, in cooperation with the academic community, will establish a long-term program to monitor wildlife species which are indicators of a diverse ecosystem.
- The District will carry out appropriate habitat enhancement projects which have been scientifically demonstrated to be effective, and will consult with the Department of Fish and Game if wildlife populations increase to levels which result in damage to park resources.
- The District will work with the Golf Course concessionaire and the Botanic Garden staff to reestablish riparian vegetation along portions of Wildcat Creek.
- District staff may redevelop a water well at the Botanic Garden to augment summer water flows and improve fish survival rates in Wildcat Creek.
- District staff will trap and remove free-roaming domestic dogs, feral cats and domestic birds when their presence conflicts with native wildlife or existing recreational uses.
- The District will remove eucalyptus litter accumulations through hand removal and/or prescribed fire to prevent unacceptable fuel load accumulations.

Identified but not proposed

None.

5. Noise

Setting

The single primary contributor to parkland noise is the traffic on both park and adjacent roadways. Other sources include the Merry-Go-Round, the Steam Trains, the Lake Anza swim complex, the Golf Course, aircraft movements, wind through the trees, and, depending upon weather conditions, the distant "roar of the city." Average noise exposure levels within the Park generally fall between 50 and 55 CNEL; an acceptable level for recreational facilities (Wilson, Ihrig and Associates [WIA], 1987). Noise exposure levels in adjacent residential areas generally fall below 60 CNEL; also clearly acceptable. CNEL is a weighted average of sound occurring over a 24-hour period.

Forty-eight hour noise measurements were taken at 3 locations in September 1986 during the midweek, on a typical weekend and on a holiday weekend (see Table 4); additional short-term (10 minutes) measurements were taken at 7 other locations. Measurements in the 50-60 dBA range indicate that noise exposure levels both within and adjacent to the Park fall within accepted exposure level standards for both recreational and residential uses (see Table 5). Table 5 gives noise measurements in decibels weighted in the A weighted scale (dBA); the most common measure used for community noise evaluation purposes.

Impacts

LUDP proposals potentially resulting in increased noise exposure levels would be traffic generated from new parking areas and the proposed reservable picnic site.

Traffic is the primary noise source affecting Tilden Park. Based on a projected areal growth rate of two percent per year, plus traffic generated from expanded park facilities, traffic in Tilden Park is predicted to increase by 60 to 66 percent in the next 25 years (CH2M HILL, 1987). Increased recreational noise added to the increased traffic noise will result in an approximately 2 dBA increase in noise level (WIA, 1987). The cumulative increase in noise level will remain within 55 and 60 CNEL for park and residential exposure, respectively; acceptable levels for such uses. Therefore, increased noise levels associated with plan proposals will result in no significant noise impact.

Mitigation

None required.

TABLE 4
NOISE MONITORING STATIONS

<u>Location</u>	<u>Description</u>
A	Old Driving Range (proposed BSF amphitheater site)
B	Above Lake Anza, below Wildcat Canyon Road
C	Los Altos Drive (overlooking the Environmental Education Center)

TABLE 5
EXISTING (1986) NOISE LEVELS

<u>Location</u>	<u>Time</u>	<u>CNEL (dBA)</u>
A	Labor Day Weekend	52/53
A	Weekday	54/55
A	Weekend	50/54
B	Labor Day Weekend	50/51
B	Weekday	50/50
B	Weekend	50/51
C	Labor Day Weekend	53/54
C	Weekday	53/50
C	Weekend	51/57

Source: WIA, 1987

6. Visual and Aesthetic

Setting

The trails along San Pablo Ridge on the east side of the Park provide panoramic views of San Francisco Bay, the Delta and Mount Diablo. Tilden's canyon setting affords park users a sense of enclosure and remoteness.

Communication facilities on Vollmer and Grizzly Peaks serve as prominent landmarks. These facilities can be seen from many park locations.

Impacts

With the exception of the fuelbreak, new development would not be highly visible from outside of the Park. From within the Park, new facilities would not be highly visible to most park users once construction is complete, since most new facilities (e.g., new parking areas and expanded parking) occur adjacent to existing similar development. The two exceptions would be the CNPS facility at the Old Driving Range and the new parking areas on the lower Brazil Building lawns. The Old Driving Range site is not highly visible from other points within the Park and landscaping would be planted to ameliorate the visual impacts of the new parking areas on the Lower Brazil Building lawns. The new picnic site at Anza View is not highly visible from other points either in or outside of the Park.

Nighttime lighting to facilitate access between the Brazil Building and its newly expanded overflow parking area, would be visible from the residential areas along the crest of the Berkeley Hills.

The consolidation of communication facilities on Vollmer and Grizzly Peaks would result in the reduced visibility of these facilities.

Mitigation

Proposed as part of the project

- Screen plantings of trees along portions of Wildcat Canyon Road will ameliorate the visual impacts of the fuelbreak.
- Screen plantings of trees will ameliorate the visual impacts of new parking areas.
- Fencing requiring replacement will be set back wherever possible to improve views along trails and roadways.
- Periodic pruning of vegetation will occur where desirable to maintain selected views.

Identified but not proposed

None.

C. Socio-Economic Environment

1. Land Use and Planning

Setting

Tilden Park is bordered on the west primarily by private development, to the east by public open space and watershed lands, to the south by private and public open space, and to the north by public open space lands.

The general plans for Contra Costa County and the City of Berkeley identify Tilden as public recreational open space (Contra Costa County, 1970; Berkeley, City of, 1977). The Association of Bay Area Governments' Regional Open Space Plan designates Tilden as permanent open space (Association of Bay Area Governments, 1972).

Tilden Park was designated in the 1988 EBRPD Master Plan as a Regional Park (EBRPD, 1988). Appropriate land uses within regional parks include: trails (equestrian, hiking, biking), concessions, swimming, picnicking, nature study and playing fields; all of which are present at Tilden.

Impacts

The LUDP for Tilden would result in the development of new, and the expansion of existing, parking facilities; the development of one new trail and new trail links; and, the development of one new picnic area and the expansion of existing picnic areas. This LUDP is consistent with the general plans of Contra Costa County, the City of Berkeley, the Association of Bay Area Governments and the East Bay Regional Park District, and would therefore result in no need to alter existing land use designations.

Mitigation

None required.

2. Traffic and Circulation

Setting

Regional vehicle access to Tilden Park is via Grizzly Peak Boulevard and Wildcat Canyon Road. Grizzly Peak Boulevard runs generally north-south, along the western park border. Wildcat Canyon Road follows a general east-west alignment through the central area of Tilden Park.

Wildcat Canyon Road connects Tilden Park with Orinda and with other cities to the east, via Camino Pablo and State Route 24 (SR-24). Grizzly Peak Boulevard connects the Park with Berkeley, Oakland and other cities to the south and west, via Fish Ranch Road and Claremont Avenue.

Regional access to the north is provided by many routes. Grizzly Peak Boulevard and Marin Avenue provide the most direct routes to Interstate 80 (I-80), but access is also available via other city streets.

Local access to the Park is via several roadways. South Park Drive provides the major access point from the south, with Wildcat Canyon Road and Lomas Cantadas serving traffic from the east. Spruce Street, Shasta Road, Canon Drive, Golf Course Road and Centennial Drive provide local access from the west and north.

There are 6 roadways within Tilden Park: Canon Drive, Wildcat Canyon Road, Central Park Drive, Shasta Road, Golf Course Road and South Park Drive. Additional minor roadways within the Park serve as access to facilities and parking lots.

Most of the roadways within Tilden, and those that provide access to the Park, have steep grades and many tight curves. Paved shoulders are not present, and unpaved shoulders are not continuous; although graded shoulders are provided for roadside parking and/or turnouts in some locations.

Existing daily traffic volumes within Tilden Park were recorded in August and September of 1986 (CH2M HILL, 1987). Additional volume counts were obtained from the City of Berkeley for areas adjacent to Tilden Park. Count date and roadway assignment are shown in Table 6.

Traffic patterns on roadways through the Park show a fairly constant flow throughout daylight hours, with a mild peak during weekday commute periods (8 to 9 a.m. and 5 to 6 p.m.). The traffic on a holiday weekend is almost double the traffic of a typical weekend on some roadway segments (see Table 6).

Weekday traffic volumes on Centennial Drive and Grizzly Peak Boulevard adjacent to the Park are significantly higher than shown for a typical weekend, indicating commuter use. On Wildcat Canyon Road near South Park Drive, the data also indicates some commuter use, although the volumes do not vary significantly between weekdays and weekends.

Published estimates of the capacity of 2 lane roadways range from a low of 7,000 to a high of 20,000 vehicles per day, depending on road characteristics. A capacity of 7,000 vehicles per day is generally assumed for applications in residential or rural areas and was used for this analysis because of use of the roadways by bicyclists and pedestrians, and because of the need to provide a worst-case analysis. The vehicle capacity figure represents the total daily capacity; half that value (3,500) represents the single direction capacity.

TABLE 6
1986 DAILY TRAFFIC VOLUMES

Major Street Reference Point	Direction	Typical Weekday	Typical Weekend	Holiday Weekend
<u>Grizzly Peak Blvd.</u>				
Shasta Road	N/B	1, 250	1, 050	1, 650
	S/B	2, 000	1, 400	1, 600
Lomas Cantadas	N/B	1, 550	1, 490	1, 750
	S/B	1, 750	1, 500	2, 000
<u>Shasta Road</u>				
Golf Course Road	E/B	900	900	900
	W/B	1, 000	650	850
<u>Wildcat Canyon Road</u>				
Park Hills Road	E/B	600	650	1, 050
	W/B	600	1, 200	1, 650
South Park Drive	E/B	1, 650	1, 500	2, 050
	W/B	1, 100	1, 100	1, 400
<u>Centennial Drive</u>				
Grizzly Peak Blvd.	W/B	1, 450	N/A	N/A
	E/B	2, 075	1, 100	1, 325
<u>Marin Avenue</u>				
Keeler Avenue	Both	2, 100	N/A	N/A
<u>Spruce Street</u>				
Montrose Road	Both	3, 225	N/A	N/A

Source: CH2M HILL, 1987

Table 7 shows 1986 Level of Service (LOS) and volume-to-capacity (V/C) ratios for a weekday, weekend and holiday weekend for each roadway. The volume-to-capacity ratios shown are less than 60 percent of capacity in all cases; indicating a high level of service. Ratios from 0 to 0.59 indicate what is generally referred to as LOS "A" conditions. In general, LOS is a letter grade assigned to describe operating characteristics, where "A" is the best and "F" is the worst. A definition of LOS is provided in Table 8.

Roadways in the Park are used by a number of bicyclists. The volume of bicycle traffic on Grizzly Peak Boulevard and Wildcat Canyon Road can reach levels as high as 25 percent of the total vehicle traffic volume on sunny weekends. In general, the roadways within Tilden Park are not wide enough to allow vehicle traffic to easily pass bicycle traffic and bike lanes are not provided. As a result, some operational conflicts occur between bicyclists and motorists. However, current operation falls within an acceptable range from a traffic engineering standpoint (CH2M HILL, 1987).

Physical obstructions, such as overhanging limbs and fencing close to the roadway, limit driver visibility in some locations.

The total estimated parking capacity within the Park is about 2,500 spaces, of which approximately 1,600 are paved and striped parking stalls, with the remaining 900 being informal roadside spaces.

Parking capacity and demand at parking lots within Tilden Park were surveyed in August and September 1986, and again in July 1987. Parking demand exceeds capacity during the peak summer months near Lake Anza, the Environmental Education Center, the Steam Trains and the Merry-Go-Round. Demand also exceeds capacity at Inspiration Point near the entrance to the Nimitz Way trail where demand exceeds capacity on a year-round basis. During October 1986, the observed demand here was for 30 stalls in excess of the existing capacity (ibid). Other areas occasionally exceeding capacity are the Botanic Garden and the area near the Central Park Drive and Canon Drive intersection. Parking capacity at other park facilities is sufficient to meet existing needs. During peak times of the year, parking in prohibited areas occurs particularly at roadside locations near Lake Anza.

Illegal parking activity is not included in the above totals. During peak times of the year, parking in prohibited areas does occur, particularly in roadside locations near Lake Anza.

Accident records from 1981 through 1984 were compared to 1985 and 1986 records to give an indication of accident trends over time. In general, the number of accidents per year have not changed during the studied time period, reflecting a decrease in accident rates, due to the increase in traffic over the same time period.

TABLE 7

**1986 ROADWAY UTILIZATION
LEVEL OF SERVICE/VOLUME-TO-CAPACITY RATIOS**

Major Street Reference Point	Direction	Typical Weekday	Typical Weekend	Holiday Weekend
<u>Grizzly Peak Blvd.</u>				
Shasta Road	N/B	A/0.36	A/0.30	A/0.47
	S/B	A/0.57	A/0.40	A/0.46
Lomas Cantadas	N/B	A/0.44	A/0.43	A/0.50
	S/B	A/0.50	A/0.43	A/0.57
<u>Shasta Road</u>				
Golf Course Road	E/B	A/0.26	A/0.26	A/0.26
	W/B	A/0.29	A/0.19	A/0.24
<u>Wildcat Canyon Road</u>				
Park Hills Road	E/B	A/0.17	A/0.19	A/0.30
	W/B	A/0.17	A/0.34	A/0.47
South Park Drive	E/B	A/0.47	A/0.43	A/0.59
	W/B	A/0.31	A/0.31	A/0.40
<u>Centennial Drive</u>				
Grizzly Peak Blvd.	W/B	A/0.41	N/A	N/A
	E/B	A/0.59	A/0.31	A/0.38
<u>Marin Avenue</u>				
Keeler Avenue	Both	A/0.30	N/A	N/A
<u>Spruce Street</u>				
Montrose Road	Both	A/0.46	N/A	N/A

Source: CH2M HILL, 1987

TABLE 8
LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	V/C Ratio
A	No physical restriction on operating speeds.	0.0 = 0.59
B	Stable flow with few restrictions on operating speed during peak hours.	0.60 - 0.69
C	Stable flow, higher volume, more restrictions on speed during peak hours.	0.70 - 0.79
D	Stable flow, high traffic volumes discourage non-vehicular activity on the street. Congestion occurs during peak periods.	0.80 - 0.89
E	Peak period congestion extends beyond one peak hour, design improvements are required to accommodate high traffic volume.	0.90 - 0.99
F	Volume is greater than theoretical capacity of the roadway. Roadway improvements or widening are required to accommodate traffic demand.	1.00 and above

Source: CH2M HILL, 1987

TABLE 9
LOCATIONS OF NEW PARKING

<u>Location</u>	<u>Parking Spaces</u>		
	New	Replacement	Total
Buckeye - upper	20	5	25
- lower	5	0	5
Central Park Drive near Canon Drive	3	25	28
Lake Anza - Dirt Overflow	5	10	15
Golf Gate	6	0	6
Equestrian Staging	6	0	6
Inspiration Point	6	23	29
Little Train Overflow	30	0	30
Anza View - Botanic Garden	23	19	42
- Brazil Building	25	20	45
Quarry	<u>0</u>	<u>10</u>	<u>10</u>
TOTAL	139	102	241

Source: CH2M HILL, 1987

A total of 312 accidents were reported from 1981 to 1986. Of these accidents, 152, or slightly under half, involved 2 automobiles. Nine accidents involved a bicycle or pedestrian (3 percent). The remaining 151 were single auto accidents. About two-thirds of all the accidents occurred in daylight hours. In general, accidents within the Park occur at major intersections and in parking lots.

The primary causal factors contributing to accident occurrences, identified by a field survey of accident sites, were: poor site distances at tight curves, poor intersection design and driver inattention in crowded parking areas (CH2M HILL, 1987).

Impacts

Additional parking capacity is proposed in Tilden Park in two types of areas: first, at areas where existing parking demand exceeds capacity, and informal or illegal parking activity constrains roadway operation; second, at locations where no formal parking is provided.

Table 9 lists the locations of the proposed parking and the approximate number of spaces to be provided. The proposed staging area improvements would add 241 formal parking stalls to the existing supply. Of these stalls, 102 would be replacements for existing informal parking, resulting in a 5 percent net increase in Tilden Park's total parking capacity.

The single greatest contributor to increased park traffic in the year 2010 will be from expected region-wide growth (2 percent annually); the other contributor would be traffic generated from new parking. Traffic from new and expanded staging areas is estimated on a per space basis. Trip generation rates for new parking stalls were based on counts made at other regional parks in the Bay Area. On a typical weekday each new parking stall would be expected to generate an average of 1.62 trips daily. On a typical weekend, a rate of 4.23 trips per stall was applied, with a predicted figure of 6.88 trips per stall used for a holiday weekend. The total projected traffic volume from new parking spaces would be 225 trips per day on a weekday, 588 daily trips on a typical weekend, and 956 daily trips on a holiday weekend (CH2M HILL, 1987).

Tables 10 and 11 show the projected traffic volumes and Levels of Service resulting from increased areal growth and the development of new parking. The trip distribution is based on current percentages of existing (1986) traffic entering and leaving the Park on a typical weekend per roadway segment. On a typical weekday or weekend, all roadways would operate at LOS "D" or better, indicating that the projected traffic volumes could be accommodated by the existing road system at an acceptable level of service. On a holiday weekend, operation would deteriorate to LOS "E" on Grizzly Peak Boulevard near Lomas Cantadas, and on Wildcat Canyon Road near South Park Drive. While the deterioration of LOS from A in 1986, to D and E in 2010 constitutes a significant impact, LUDP proposals would only be minor contributors, with the majority of the decline due to new traffic resulting from area-wide growth.

TABLE 10
2010 DAILY TRAFFIC VOLUMES

		Projected Daily Traffic Volumes		
Major Street Reference Point	Direction	Typical Weekday	Typical Weekend	Holiday Weekend
<u>Grizzly Peak Blvd.</u>				
Shasta Road	N/B	1, 860	1, 560	2, 460
	S/B	2, 960	2, 090	2, 380
Lomas Cantadas	N/B	2, 310	2, 270	2, 690
	S/B	2, 660	2, 340	3, 100
<u>Shasta Road</u>				
Golf Course Road	E/B	1, 320	1, 370	1, 400
	W/B	1, 530	1, 050	1, 330
<u>Wildcat Canyon Road</u>				
Park Hills Road	E/B	880	1, 040	1, 630
	W/B	870	1, 840	2, 480
South Park Drive	E/B	2, 440	2, 300	2, 640
	W/B	1, 680	1, 690	2, 130
<u>Centennial Drive</u>				
Grizzly Peak Blvd.	W/B	630	N/A	N/A
	E/B	3, 090	1, 670	2, 020
<u>Marin Avenue</u>				
Keeler Avenue	Both	3, 160	N/A	N/A
<u>Spruce Street</u>				
Montrose Road	Both	4, 800	N/A	N/A

Notes:

1. All values have been rounded to the nearest multiple of 10.
2. For descriptive purposes, Wildcat Canyon Road is defined as having an east-west alignment, and Grizzly Peak a north-south alignment.
3. N/A = Not Available.

Source: CH2M HILL, 1987

TABLE 11
2010 ROADWAY UTILIZATION
LEVEL OF SERVICE/VOLUME-TO-CAPACITY RATIO

		Volume-to-Capacity Ratios		
Major Street Reference Point	Direction	Typical Weekday	Typical Weekend	Holiday Weekend
<u>Grizzly Peak Blvd.</u>				
Shasta Road	N/B	A/0.53	A/0.45	C/0.70
	S/B	D/0.85	B/0.60	C/0.68
Lomas Cantadas	N/B	B/0.66	B/0.65	C/0.77
	S/B	C/0.76	C/0.67	C/0.89
<u>Shasta Road</u>				
Golf Course Road	E/B	A/0.38	A/0.39	A/0.40
	W/B	A/0.44	A/0.30	A/0.38
<u>Wildcat Canyon Road</u>				
Park Hills Road	E/B	A/0.25	A/0.30	A/0.47
	W/B	A/0.25	A/0.53	C/0.71
South Park Drive	E/B	C/0.70	C/0.68	E/0.90
	W/B	A/0.48	A/0.48	A/0.61
<u>Centennial Drive</u>				
Grizzly Peak Blvd.	W/B	A/0.18	N/A	N/A
	E/B	D/0.88	A/0.48	A/0.58
<u>Marin Avenue</u>				
Keeler Avenue	Both	A/0.45	N/A	N/A
<u>Spruce Street</u>				
Montrose Road	Both	B/0.69	N/A	N/A

Source: CH2M HILL, 1987

Traffic generated by implementation of the LUDP is assumed to follow similar distribution patterns as existing traffic, with past accident trends also expected to remain constant.

Wildcat Canyon and Grizzly Peak Roads serve many of the bicycle trips through the Park. Projected increases in vehicular traffic would reduce rider comfort and safety.

Retaining the Botanic Garden fencing adjacent to the edge of Wildcat Canyon Road will continue to impair driver visibility.

Mitigation

Proposed as part of the project

- The District will develop parking areas where necessary to accommodate both existing and projected future needs (see LUDP Chapter III.C.3.).
- The District will place "no parking" signs in areas where illegal parking occurs to direct parking into more appropriate areas.
- The District will install warning signs in advance of intersections and at curves, where necessary.
- The District will install double yellow centerline striping near intersections and curves to prohibit passing maneuvers at critical locations. Use of reflective paint and raised pavement markers in the centerline will improve nighttime travel.
- The District will clear brush and limb trees to improve site distances where needed.
- The District will realign to standard T configurations the intersections of Central Park Drive and Wildcat Canyon Road, and Shasta Road and Wildcat Canyon Road.

Identified but not proposed

- The District could improve sight distances, and thereby increase traffic safety, by pulling the Botanic Garden fence away from the edge of Wildcat Canyon Road. This is not proposed because of the impact it would impose on the Botanic Garden.

3. Community Services

Setting

Tilden Park is supplied by EBMUD water lines at several points. One line descends along Canon Drive and serves the Environmental Education Center (EEC), the Pony Ride, and nearby picnic areas. Another serves the Merry-Go-Round and nearby picnic areas. A third serves the Lake

Anza swimming complex. A fourth serves the Brazil Building and the Botanic Garden. Another serves the Corporation Yard, the train complex and the group camp and picnic areas south of the Golf Course. The irrigation water for the Golf Course is supplied from Berkeley View Reservoir near Golf Gate. A spring located east of the Golf Course is piped and boxed to fill a wooden water tank; however, this tank is not connected to any water line. With the exception of the Corporation Yard, no water is available on the east side of the Park.

Electricity and telephone services are available at major facilities, including all service facilities, the Little Train, the Golf Course, the Brazil Building, the Botanic Garden, the Lake Anza swim complex, the Merry-Go-Round, the Pony Ride and the EEC.

The Golf Course Clubhouse is served by a natural gas pipeline. Other major facilities are served by bottled gas.

The City of Berkeley maintains a sewer line along Wildcat Canyon Road, from the city limits to Spruce Street, to serve the residents of the Berkeley Hills. Sewage from the Golf Course and Brazil Building areas drains into this line, while sewage from the Lake Anza complex is pumped up to it. All other sanitary facilities are either chemical toilets or subsurface holding tanks which are periodically pumped out.

At the south end of Tilden Park is a service complex which provides a variety of functions. The Central Stores warehouse, serving the entire District, is located here, as are the offices of the District-wide roads and trails maintenance crew. The offices and Corporation Yard serving Tilden Park and a security residence are also located here, as is a District-wide vehicle maintenance facility.

A branch office of the EBRPD Public Safety Department operates out of offices at the Lake Anza swim complex. There is a small Corporation Yard, serving the northern end of Tilden. Security residences are located at the EEC and the Brazil Building.

Impacts

Increased water usage would be necessary to serve CNPS's needs at the Old Driving Range site. This increase would be offset somewhat by the decrease in water use associated with the removal of the District-wide vehicle maintenance service. Increased demands envisioned for other services could be met.

Mitigation

None required.

4. Archaeology and History

Setting

Tilden Park has a rich and varied history including the following: use of the area by the Native Huchuin Indians; large grazing and dairying operations; development of lakes and well fields by water companies; use by the Civilian Conservation Corps (CCC) and the Work Progress Administration (WPA); use for Army operations during World War II; and, its present use as parkland. Remnants of these former uses are reflected in the Lake Anza pump house, stone signs, drinking fountains, drainage structures, camp fire huts and toilet buildings constructed by the CCC; the landscaping associated with former dairy operations; and eucalyptus forest plantations. The Merry-Go-Round is a historic resource imported to Tilden and is listed on the National Register of Historic Places. The Brazil Building is an historic structure constructed, in part, of materials associated with an historic event, the San Francisco World's Fair of 1939.

In 1983, a reconnaissance of Tilden Park was conducted by qualified archaeologists without identifying any prehistoric archaeological resources. One prehistoric site, previously recorded near Jewel Lake, was not relocated during this investigation and may have been destroyed by construction of the Lake. The radical change in vegetation which has occurred in this area since prehistoric times may have precluded access to areas of prehistoric use and/or habitation during this investigation. Existing evidence, although incomplete, indicates that the prehistoric use of the Park consisted of hunting and food gathering trips centering upon living areas located at the mouth of Wildcat Canyon (Holman, 1983).

Impacts

While no prehistoric archaeological sites were identified during a 1983 reconnaissance of the Park, the potential exists for their presence here.

None of the land use proposals contained within the LUDP would impact known cultural resources.

Mitigation

Proposed as part of the project

- The discovery of presently unknown archaeological resources will be treated according to established District policy (EBRPD, 1987).

Identified but not proposed

None.

5. Fiscal

Setting

There are six fee activities in Tilden Park. Fee activities include: group reservable picnicking, the Lake Anza swim complex, the Golf Course, the Pony Ride, the Little Train, and the Brazil Building. With the exception of Lake Anza, the Brazil Building, and reservable group picnicking, all fee generating activities are run by private concessionaires.

Impact

The LUDP provides for the development of a new group reservable picnic sites which would provide increased park revenues. The NRMP provides for tree removal which could provide revenues if wood products were to be sold. The new CNPS growing ground at the Old Driving Range site is not expected to result in the generation of additional revenues, as the resulting annual plant sale already contributes to Botanic Garden revenues.

Mitigation

None required.

D. Impact Overview

1. Unavoidable Adverse Impacts

- Minor increases in erosion and stream sedimentation for the first year or two following grading projects.
- Pollution of water bodies due to sewage leakage resulting from a large earthquake.
- Possible escape of prescribed fire set for vegetation management purposes.
- Possible rupture of the Lake Anza and Jewel Lake dams as a result of an earthquake, resulting in property damage and the possible loss of life as a result of sudden downstream inundation. The high velocity flows would also result in stream degradation due to scour.

All of these are adverse impacts which would occur, to some degree, despite mitigation measures outlined in the EIR. The LUDP is proposed, despite its unavoidable adverse impacts, because the benefits of providing the proposed recreational facilities are judged to outweigh the adverse impacts.

2. Irreversible Environmental Changes

Once expanded parking, picnicking, trackage and trail links are completed, it is unlikely that human use of the affected land would ever cease. For the most part, new development will occur at or adjacent to previously developed sites. Nonetheless, these developments represent irreversible commitments of land for recreational purposes.

3. Short-Term Uses Versus Long-Term Productivity

The uses included in the LUDP are all long-term uses, as are the management strategies outlined in the NRMP.

4. Growth-Inducing Impacts

Actions taken to modestly expand park facilities do not constitute a significant growth-inducing impact. Facilities expansions and new facilities are proposed to meet both the existing and future needs of area residents.

5. Alternatives

a. The no project alternative.

This alternative would make no further capital improvements to Tilden Park. Existing natural resource management practices would continue unaltered. This alternative would avoid the grading necessary to develop and expand parking and other facilities and, therefore, the erosion associated with that grading. This alternative would result in the continuation of illegal parking along park roadways and its associated adverse traffic safety implications. Because there is no existing fuel management plan, this alternative would eliminate the potential for an "escape" of a prescribed fire. However, the lack of a fuel management program as outlined in the NRMP would significantly increase the probability of the occurrence of an uncontrollable wildfire due to the build up of excessive fuel loads. Such wildfires would have substantial increased adverse impacts upon vegetation, wildlife, and possibly, adjacent residential areas, than would occur under the fuel reduction practices which are part of the NRMP. This alternative is not proposed because it does not adequately address the needs of parkland users and because of the adverse impacts of wildfires on wildlife and humans.

b. Development of an amphitheater as part of the LUDP.

Under this alternative, the LUDP would include an amphitheater at the site of the former driving range (near the Golf Course). The EBRPD has received a specific proposal for such a facility from the Berkeley Shakespeare Festival (BSF), a locally-based theater company. The proposal includes seating for 550 people, a wooden stage with associated lighting and scenery support structures, a toilet structure, a box office/food concession structure and a

dressing room structure. Parking is proposed to be provided by a combination of existing on-site parking and a shuttle-bus service between here and the parking lot at the Lawrence Space-Science Center, about one mile to the west (via Golf Course Road and Centennial Drive). The BSF proposal is for a 16 week summer season of evening performances on Tuesdays through Saturdays, with afternoon (matinee) performances on Wednesdays and Sundays. The proposal also includes the sale of beer and wine at the food concession stand and the use of electrically amplified music. During the remainder of the year, the facility would be available on a reservation basis for plays, concerts and similar events.

In the year 2010, during the BSF season, weekday traffic volumes from this alternative would cause significant declines in the traffic Level of Service (LOS) in two locations. Grizzly Peak Boulevard (near Lomas Cantadas) would drop from LOS C to D, while Centennial Drive would drop from D to E (CH2M HILL, 1987). These projections assume a vehicle occupancy rate of 2.9 persons and a distribution of vehicles reflective of the addresses on the 1986 BSF mailing list. Similar declines in traffic LOS may occur during other events at the amphitheater in the portion of the year when BSF is not in operation.

With minor modifications, the existing parking lot at the Old Driving Range is sufficient for events involving about 250 persons. The ability of BSF to carry out events involving 600 persons (including staff and performers) is dependent upon a high vehicle occupancy rate, the ability to assign specific parking spaces to participants (enforced by parking lot monitors), and the ability to use the Lawrence Space-Science Center lot for additional parking.

Parking at the Lawrence Space-Science Center might not be available to participants of amphitheater events. Thus, when these events involve more than 250 persons, they are likely to use nearby parking stalls at the Golf Course and on-street parking along Golf Course Road, Grizzly Peak Boulevard and Summit Road. This would conflict with other parking demands in these areas and may include illegal and/or unsafe parking. The lack of sidewalks along these roadways would mean that participants who have parked there would walk in the roadway increasing the probability of vehicle/pedestrian accidents. These kinds of parking related impacts would not occur with the proposed LUDP.

Performances of BSF plays would produce sound levels at the nearest residences of about 45 dBA; about 5 to 10 dBA above existing background levels (WIA, 1987). This is based upon noise generated at the site of the proposed stage, measuring 95 dBA at 50 feet from the stage; measurements were taken on an evening when a thermal inversion was present to obtain a worst-case analysis. Such levels would be normally audible except when a louder noise source, such as from overflying aircraft, were present. It would not be loud enough to interfere with a normal conversation between persons in

the yards of these houses. Greatly amplified music from other types of performances could produce sound levels at the nearest residences of about 65 dBA, or about 25 to 30 dBA above background levels (ibid.). This is based upon noise generated at the proposed stage site, measuring 115 dBA at 50 feet from the stage (measured on the same evening as noted above). Such sound levels would be distinctly audible and would be loud enough to interfere with a normal conversation between persons in the yards of these residences. These impacts would not occur with the proposed LUDP.

This alternative is not proposed because it would result in several significant adverse environmental impacts such as traffic, parking and noise.

c. Traffic/Circulation alternatives.

The first circulation alternative considered was the closure of all roads in the Park to public vehicles and the provision of shuttle-bus service between the Park's major attractions. Since most park users would continue to arrive by automobile, new parking areas would be needed along the perimeter of the Park. The need for new parking areas, coupled with the desirability of removing most existing parking, would require large-scale grading within the Park, resulting in erosion and siltation of water courses. Further, it is doubtful that the potential ridership would be sufficient to justify such a shuttle-bus system (CH2M HILL, 1987; DeLeuw-Cather Associates, 1976). This alternative is not proposed because of feasibility considerations and its high potential for erosion and siltation. These impacts would not occur under the project.

The second circulation alternative considered was the periodic closure of Golf Course Road to public vehicles by the installation of a gate south of the existing Golf Course parking lot. This would force an unknown but small percentage of the through traffic from this road to Shasta Road and Grizzly Peak Boulevard. This also would allow the use of a portion of the roadbed (south of the gate) for parking to serve the amphitheater alternative (see above). The diversion of through traffic would result in an increase in noise (WIA, 1987) and in a decline in traffic Level of Service (CH2M HILL, 1987) along the affected roadways; however, these would not be significant impacts. This alternative is not proposed because the amphitheater alternative is not proposed and the need for it is thereby obviated.

The third circulation alternative considered was the closure of South Park Drive to public vehicles by the installation of two gates, one located 300 feet south of the Wildcat Canyon Road and South Park Drive intersection, and one located approximately 3,000 feet further south (south of Big Springs). This would force the diversion of through traffic from South Park Drive to Wildcat Canyon Road and Grizzly Peak Boulevard. The diversion of through traffic would result in an increase in noise (WIA, 1987) and a decline in traffic

Level of Service (CH2M HILL, 1987) along the affected roadways. The increase in noise would not be significant. Along Grizzly Peak Boulevard the traffic volumes would be greater than under the project but not enough to cause a decline in Level of Service. Along Wildcat Canyon Road, traffic volumes would be significantly greater than under the project; the resulting Level of Service would be reduced from A to C. This alternative is not proposed because it would cause significant adverse changes to the traffic Level of Service on Wildcat Canyon Road.

The fourth circulation alternative considered was the closure of Central Park Drive to public vehicles by the installation of two gates; one located just north of the Merry-Go-Round, and one 2,200 feet further north. This would divert both through traffic and trips between park facilities via Canon Drive and Wildcat Canyon Road. The diversion would result in an increase in noise and a decline in traffic Levels of Service along the affected roadways. This alternative was rejected prior to quantification of these impacts because the impacts were judged to be unacceptable on their face.

Another proposal was to provide Class 2 bike lanes (3 foot wide travel routes along both sides of the roadway) in an attempt to increase roadway safety. This idea was rejected because of the need for installing numerous retaining structures in active landslide and gullied areas, and because of the extensive amounts of grading that would also be required which would result in significant adverse affects associated with the resultant increased erosion and sedimentation.

d. California Native Plant Society growing ground alternative.

Two environmentally superior alternatives for the siting of the California Native Plant Society (CNPS) growing ground in Tilden Park were identified during the planning process. One proposal was to place this facility at the Corporation Yard site subsequent to the removal of existing facilities. This idea was rejected because of the uncertain timeframe for facility removal and the lack of solar exposure required for plant propagation.

Another idea was to site the growing ground at the Old Driving Range site on existing graded areas so that no new grading would be required. This was also rejected because of the lack of necessary solar exposure required for plant propagation.

e. Group picnic site at Old Driving Range alternative.

Under this alternative, the LUDP would have included the provision for a new reservable picnic site at the Old Driving Range. After careful consideration, this proposal was dismissed for both environmental and political reasons. In order to accommodate both picnicking and CNPS uses at the site, considerably more grading would have been required, resulting in increased erosion. Objection

had been voiced by nearby residents who felt that picnicking here would disturb their peace and quiet and would increase fire risks. The proposal to provide for additional picnicking to meet future needs via in-fill at existing sites was deemed to be an environmentally superior alternative, so the provision of new picnicking at the Old Driving Range site was withdrawn.

f. Group picnic site at Equestrian Camp alternative.

The proposal to provide group picnickers and associated parking at the Equestrian Camp site was rejected due to a lack of public support and stated concerns regarding potential traffic and visual impacts.



VI. APPENDICES

A. Planning History

Planning the Future of Tilden Park demands a critical knowledge and understanding of the Park's past. The history of planning in the Park begins with the Olmsted Brothers and Ansel F. Hall who were hired by a citizen group to do a comprehensive survey of the recreation needs of the East Bay communities in 1930. They envisioned a park system which would be widely used for picnic outings, hiking, horseback riding, and field sports, both by families and by organized groups, e.g.: as youth groups, hiking clubs. The report described the park purposes as distinct from those of local or neighborhood parks and playgrounds. It stated that "much of it is ideal, in fact, for real metropolitan park users, or county park users of a regional character where continuity, extent geographic unity, varied scenery, and freedom from outside activities are factors in the value of the park." (Olmsted and Hall, 1920.)

At the time of the founding of the Park District in 1933, three United States Civilian Conservation Corps (CCC) camps were established on District properties. In 1934, the CCC established a camp in what was to become Tilden Park (see Figure 5 in the Wildcat Canyon/Tilden Resource Analysis, 1984). This camp functioned as a base for workers, both of the CCC and the Works Progress Administration (WPA). Elbert Vail authorized the construction of 2 CCC camps in Wildcat Canyon and Tilden and proposed a series of WPA projects, from tree planting and erosion control work to road construction. Work crews did much of the work clearing the Golf Course of eucalyptus trees. The Golf Course and Clubhouse were constructed by these crews as were areas for picnicking and camping. The Administration Center was located at the old Bruno House. A few areas were graded and expanded for field games, and a 90 foot earthen dam created Lake Anza. Stone signs, drinking fountains, restrooms and drainage structures built by these crews still remain in Tilden Park today.

Charles Tilden negotiated the transfer of title of the watershed lands from the East Bay Municipal Utility District to the Regional Park District. In 1936 the transfer of the land was completed; 4,000 acres of Utility District land became a chain of 4 parks stretching 22 miles along the eastern edge of the East Bay cities. The 4 original parks were Temescal, Roundtop (later named Sibley Preserve), Redwood, and Wildcat Canyon (later named Tilden Park).

Although the Park was far from complete on Sunday, October 18, 1936, the Park was officially opened. That same year Major Tilden's 79th birthday was celebrated at the Claremont Hotel. At that time, the board announced the news that the former Wildcat Canyon Park had been renamed the Charles Lee Tilden Regional Park.

WHERE & WHAT!

of The EAST BAY REGIONAL PARK DISTRICT

Playtime Guide

SHADED  AREA SHOWS THE NATURAL PARKS

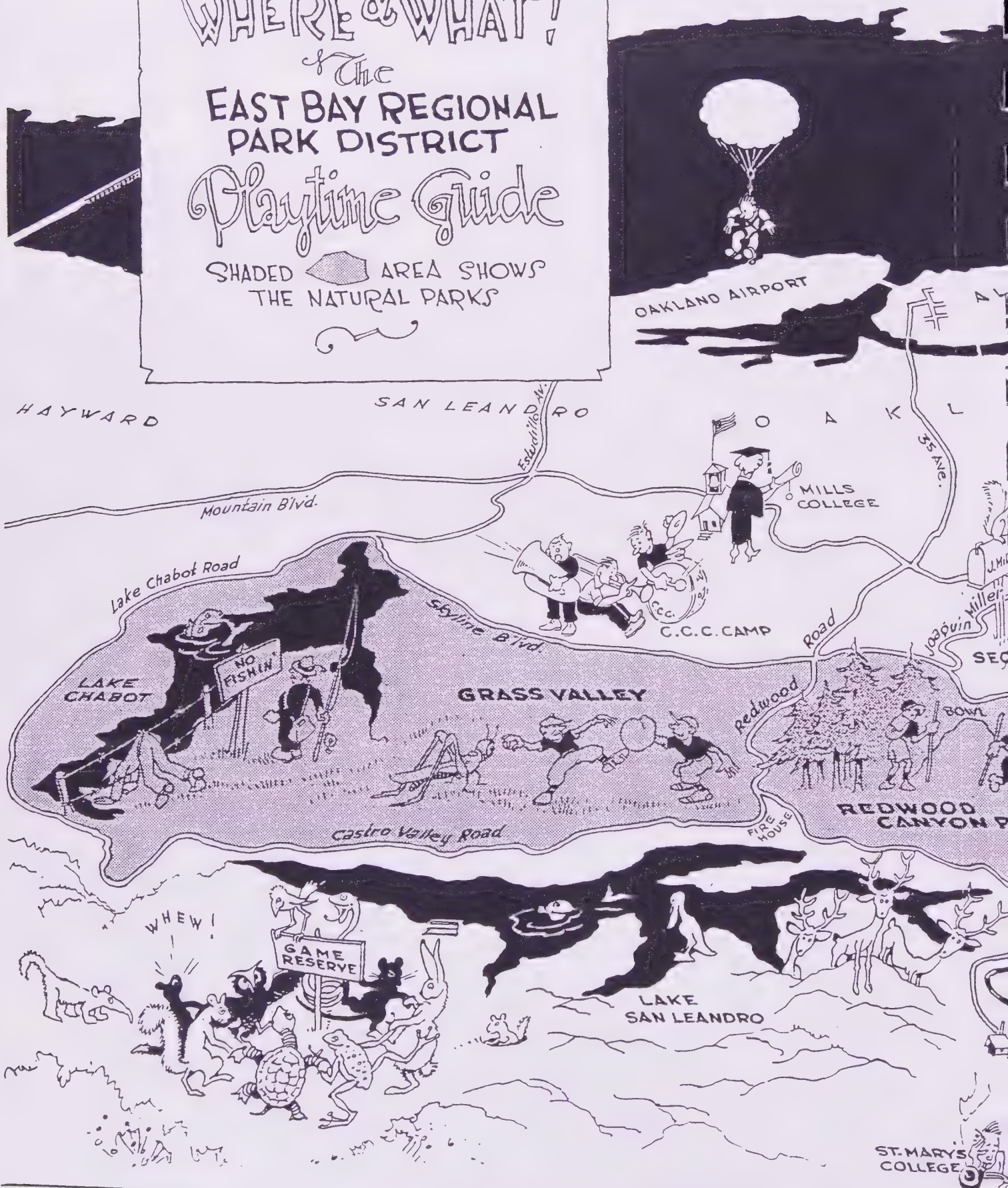


Figure A-1
PLAYTIME GUIDE



Shortly before he retired as General Manager in 1940, Elbert Vail drew up a "Master Plan", the first of the District's many long-range plans, in which he reviewed the past few years of progress in developing the Park for recreation and outlined the work to be done in the years to come.

As Vail explained, "The Master Plan contemplates the preservation of typical California landscape, the natural park values, and the protection of the flora and fauna which are so commonly destroyed by the advance of civilization." He outlined Tilden Park's use by stating "Charles Lee Tilden Regional Park is an extensive valley one mile wide and four miles long, through which runs a lovely stream studded with oaks, and with numerous eucalyptus groves and wide open spaces. This valley is particularly suited to intensive recreation uses which can be achieved without destroying any of its primitive California landscape" (Vail, 1940).

Between the years of 1940 and 1964, planned and unplanned development proceeded on a project-by-project basis. Of the facilities proposed in the 1940 Master Plan, only a few went in as planned (see Figure A-1). The Nursery and Park Office shown on the map are no longer park facilities. Some existing roads such as Sea View, Loop Drive and Big Springs are no longer open to the public, having become service roads and hiking/equestrian trails. The amphitheater designated in the present Nature Area was never constructed.

At the outbreak of World War II, the CCC and WPA workers were withdrawn and the District offered about 500 acres in Tilden Park to the Army Defense Command. The abandoned CCC barracks became a rest camp for convalescing soldiers. The Fourth Air Force established the Pacific Area Communications Center in what is now the Tilden Service Yard.

During the last war years a new era of growth and consolidation resumed with the addition of a vintage Hershell Spillman carousel, a Pony Ride, and a trout pond. In 1952, a scale model live-steam railroad was built and operated by a lessee and a Little Farm was constructed in 1955.

In 1952, the U. S. Army purchased approximately 70 acres and leased another 50 acres of land along San Pablo Ridge from EBMUD, for the purpose of building a missile defense (NIKE) battery. This area later was expanded to 518 acres of land in Tilden Park, plus an easement for a sewer and a water line. Facilities included barracks, block house, work areas, and missile silos, and housing for families (see Figure 4 in Resource Analysis). In 1962, after less than 10 years of Army occupancy, the site was abandoned.

The "Forward 1964-69 Capital Improvement and Land Acquisition" report was a District-wide planning effort which included a 5-year development plan for all of the District's 8 parks. This planning was done in anticipation of an additional 5 cent tax (on \$100 of assessed valuation)

that had been granted by the State Legislature for the 5 year period, and the annexation of the western half of Contra Costa County.

The plans of the Forward 1964-69 program were to be general plans that would be flexible and further refined as the particular projects progressed. The Forward Plan was more development oriented than the 1940 Master Plan and included improvements to the Little Farm, Pony Ride, Lake Anza, Botanic Garden, Golf Course, Archery Range, and Train Complex, as well as proposed new facilities such as a Milk Bar, Service Yard and 9 hole Golf Course. Many of these facilities were never constructed. The Plan also included an amphitheater in the Nature Area, an entrance through Wildcat Park, an entrance complex at Canon Drive, a rental horse barn, and the relocation of the Pony Ride. Plans for these along with plans for a Milk Bar and a 9 hole Golf Course were never implemented. The Plan outlined development for a "Homestead Ranch" as an addition to the Little Farm. Some of these facilities were constructed, such as fowl, livestock and hay barns, in the already existing farm area, but plans for a smoke house, milk house and root cellar were never implemented. The Plan identified a location for a Service Yard, which was developed, but at a location different from where it exists today.

In June of 1973, the District adopted the "Overview of the Master Plan" by Steward Udall, which evolved into the "East Bay Regional Park District Master Plan" published in December of 1973. This was a District-wide policy and program document largely oriented toward an active acquisition program in response to an additional 10 cent tax increase. The "Master Plan", revised in 1988, established a classification system for parks designated as Regional Parks, Shorelines, Preserves, Wildernesses, Recreation Areas, Trails, and Land Banks. Tilden was classified as a "Regional Park." (See Chapter II.C) In November of 1975, the Board accepted the Wildcat Canyon/Tilden Resource Analysis which was revised in 1984. The Resource Analysis is the first step in the parkland planning process required by the District's Master Plan."

TABLE A-1

Chronology of Historic Events

The following chronology, collected from a number of sources, traces the history of the parks from the earliest recorded concept to the current planning effort.

- 1866: Frederick Law Olmsted, Sr., designer of Central Park in New York, completes the Landscape Study for the College of California (now U. C. Berkeley), and recommends "scenic lanes" into the hills.
- 1886: Hillside Club advocates environmentally sensitive development in the Berkeley Hills.
- 1906: Charles Mulford Robinson completes report on civic improvements in Oakland and recommends hill area for parklands.
- 1920: Contra Costa Hills Club advocates conserving the scenic beauty of the Contra Costa Hills.
- 1923: East Bay Municipal Utility District formed.
- 1925: John McLaren, designer of Golden Gate Park, recommends East Bay hill area for natural parks.
- 1927: State legislature authorizes a State Park survey.
- 1928: East Bay Metropolitan Park Association, Oakland Park League, East Bay Regional Planning Association formed to investigate suitability of retaining surplus land until public sentiment could be determined.
- 1929: Olmsted, Jr. prepares State Park Survey.
- East Bay Municipal Utility District purchases East Bay Water Company.
- 1929-1930: Ansel Hall of National Park Service does preliminary study of park possibilities using EBMUD lands.
- 1930: Kahn Foundation deposits \$5,200 to finance study with U. C. Bureau of Public Administration under the direction of Samuel C. May.
- East Bay Regional Park Association (formerly East Metropolitan Park Association) invites Olmsted Brothers and Hall to do study.

- 1931: Olmsted-Hall Report is completed.
- At a meeting at Hotel Oakland, the 22 member Board of Directors is appointed by representatives of 9 East Bay cities. Board goes on record "opposing creation of any new governmental agencies or agency or the issuance of bonds to buy the lands already publicly owned."
- 1933: Mayors of 7 cities appoint committee to acquire land. Elbert Vail appointed chairman.
- New law authorizing formation of regional park.
- Bill passed by Assembly.
- Bill passed by Senate.
- Joint District Park Committee appointed by Mayor W. J. McCracken of Oakland, and Mayor Edward N. Ament of Berkeley to study means of land acquisition to negotiate transfer of land from EBMUD, and to outline how to bring matter to people. Vail appointed Chairman.
- Bill signed by Governor James Rolph, Jr.
- 1934: Park measure and candidates for Board of Directors on ballot passed.
- 1934-1936: Major Charles Lee Tilden, President of the Board of Directors of EBRPD, negotiates land purchase from EBMUD with Dr. George C. Pardee, President of the Board of Directors, EBMUD.
- 1935: Sixteen improvement projects that Vail proposed are approved by the WPA.
- 1936: "Preliminary Report Upon the Proposed East Bay Regional Park District" is completed.
- Park District purchased 4 original parks: Wildcat (now Tilden), Redwood, Temescal, Roundtop (now Sibley).
- Vail appointed first General Manager. District Attorney Earl Warren appointed Park Attorney.
- WPA and CCC camps established on park properties.
- Wildcat Canyon Park name changed to Tilden Park on Tilden's 79th birthday.
- The 18 hole Golf Course opens.

- 1936-1941: WPA and CCC crews construct roads, trails, and other facilities in the Park.
- 1938: The earth fill dam across Wildcat Canyon begins which creates Lake Anza.
- 1939: The Brazil Building arrives in Tilden.
- 1940: Board of Directors approves Master Plan by Vail.
The Botanic Garden opens.
- 1941: The Brazil Building opens.
Four to 12 acres in Laurel Canyon are set aside for an arboretum.
- 1941-1945: War Years: CCC and WPA workers withdrawn, and 500 acres in Tilden Park occupied by Army Defense Command.
- 1944: U. S. Army leased land for anti-aircraft installation.
- 1947: Nature Area acreage was set aside in the northernmost portion of Tilden.
- 1948: Merry-Go-Round installed.
Pony Ride opens.
- 1952: U. S. Army constructs NIKE battery.
Little Train opens.
- 1955: The Little Farm constructed.
- 1960: Anti-aircraft installation abandoned.
- 1962: Nature Area opens in old CCC barracks.
Junior ranger program is established.
- 1963: Board approves preliminary plans for 9 hole Golf Course.
Board gives authorization to relocate archery range from Tilden Nature Area to Golf Gate.
Board gives authorization to proceed with plans for a nature center.
- 1964: "Forward 1964-69 Capital Improvement and Land Acquisition Program" adopted by the Board.

- 1966: District begins to convert anti-aircraft installation into Corporation Yard.
- 1966: Communications towers site located on Vollmer Peak.
- 1971: Trackage of Little Train expanded and entrance moved from South Park Drive.
- Golden Gate Live Steamers relocates facility from Redwood Regional Park.
- 1972: Freeze kills Eucalyptus.
- 1973: The District accepts the "Overview of the Master Plan."
- Botanic Garden visitors' center built and opens.
- 1973-1974: Board accepts resolution concerning maintenance of fuelbreak on west edge of Tilden.
- 1974: Environmental Education Center constructed and opens.
- 1975: Wildcat/Tilden Resource Analysis accepted by board.
- 1976: Merry-Go-Round added to the National Register of Historic Places.
- 1977: EBRPD buys Merry-Go-Round.
- 1978: Wildcat/Tilden Resource Analysis revised.
- 1982: Report of the Blue Ribbon Committee accepted by Board.
- 1983: Little Train maintenance shop converted from old Army mess hall.
- 1984: Wildcat/Tilden Resource Analysis revised.
- 1985: Botanic Garden extended its northwestern boundaries.

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Various East Bay Regional Park District News Releases.



C. Report Preparation

1. Report Authors

This Land Use-Development Plan/Environmental Impact Report was prepared by the Planning and Land Stewardship Departments staff of the East Bay Regional Park District under the direction of David E. Pesonen, former General Manager. Thomas H. Mikkelsen, Assistant General Manager of Planning, Acquisition, Design and Land Stewardship, Jonathan Hammond, former Chief of Planning and Kevin Shea, Chief of Land Stewardship directed the project. The Planning staff was led by Jocelyn Real, Park Planner, which included work by Karen Parsons, Landscape Architect, Judy Boshoven, Drafting Technician, Kathy Welborn, Administrative Clerk, and Marina Ferrari, Word Processor. Peggy Shannon, Resource Analyst, led the Land Stewardship team which included work by Tom Lindenmeyer, Environmental Specialist, Ken Burger, Water Management Specialist, Laurel Collins, Geologist, Neil Havlik, Range Management Specialist, John Nicoles, Land Management Specialist, and Nancy Schley, Secretary. Acoustical work and traffic analysis were provided by Wilson, Ihrig and Associates, CH2M HILL. Photographs were taken by Bob Walker, Nancy McKay and Jocelyn Real.

The ideas, information and support of other departments within the District, particularly the Operations Department under the direction of Jerry Kent, Assistant General Manager, and Tilden Park Supervisors Rachel McDonald of Tilden, Margaret Kelley of Tilden Nature Area, Steve Edwards of the Botanic Garden, and their staff are hereby gratefully acknowledged. In addition, the ideas and information suggested by other agencies, groups and individuals from the general public contributed greatly in the creation of this Plan.



D. Master Plan Policies

Purpose of the East Bay Regional Park District

The East Bay Regional Park District (EBRPD) will acquire, preserve, protect, develop, and operate regional parklands in Alameda and Contra Costa counties in perpetuity for public use. It will conserve these lands to make the outdoor environment available for the enjoyment and education of the public. (The California Public Resources Code, Article 3, 5500 series describes the purpose and powers of the EBRPD and is summarized in Appendix A.) The Board of Directors has established the following goals as being necessary to accomplish the EBRPD's purpose. These objectives are intended to provide the public, the Board of Directors, the EBRPD staff, other governmental agencies, and the private sector with a clear statement that will guide the EBRPD in implementing this Master Plan.

The District will:

- a. Provide a diversified land-and-water system of regional parks, preserves, shorelines, wildernesses, open space, recreational areas, land banks, trails and parkland-related services, which will offer EBRPD residents opportunities for creative use of outdoor leisure time.
- b. Acquire and preserve significant systems of the natural environment including biologic, geologic, scenic, prehistoric, and historic resources that exist within the EBRPD boundaries.
- c. Cooperate with other public agencies in acquiring, preserving, and managing non-park open space lands and ecosystems and in fostering sound land stewardship practices.
- d. Balance environmental concerns and regional recreation opportunities within regional parklands.
- e. Provide appropriate recreational development so that it both fosters use and preserves the remoteness and natural values of these lands.
- f. Preserve and manage the parklands so that they retain their important scenic, natural, and cultural values.
- g. Enhance access and use of the parks by members of special populations, such as disabled, disadvantaged, and elderly visitors.
- h. Interpret the parklands by focusing both on the visitor's relationship to nature, and the parklands' values, natural processes, ecology, and history.
- i. The District will be a "good neighbor" to adjacent owners by managing its resources and planning, developing and operating its parks in a manner that does not conflict with adjacent management practices or that reduces impacts to the greatest extent possible.

Regional Park

Purpose

A Regional Park provides a spacious land area with outstanding natural features and many outdoor recreation opportunities for the enjoyment and education of the public.

Minimum Standards

To be considered as a Regional Park, an area must have the following characteristics:

- a. Be an area of land, or land and water, of 500 or more acres.
- b. Have, or potentially have, a scenic or natural character in 70 percent to 90 percent of its area. The District designates this portion as a Natural Unit for planning and management purposes.
- c. Be able to accommodate a variety of recreational activities on up to 30 percent of its area. The District designates this portion as a Recreation Unit for planning and management purposes.

Planning and Management Guidelines: Natural Unit

- a. The Natural Unit will contain the significant natural features of the parkland in a cohesive area to be preserved and enhanced.
- b. Only activities that are compatible with the environmental values of the natural Unit will be allowed, while preserving -- or restoring where necessary -- scenic, near-natural landscape conditions.
- c. Development will be limited to making the Natural Unit available for public enjoyment in a manner consistent with the preservation of natural resource. Development may include basic, but not elaborate, improvements that are necessary for hiking, nature study, horseback riding, camping, and related outdoor activities.
- d. A Natural Unit may contain a Regional Preserve Unit.
- e. A Natural Unit may contain peripheral access staging facilities for internal trails.

Planning and Management Guidelines: Recreation Unit

- a. A Recreation Unit will contain all recreational development and staging facilities including campgrounds, picnic areas, snack bars and concessions, outdoor education and interpretive facilities, equestrian facilities, bathhouses, turfed meadows, archery fields, and other regional outdoor recreational facilities. The Recreation Unit will be located at the edge of the Natural Unit whenever possible.
- b. The design, landscape, and management of all facilities will harmonize with the surrounding natural landscape.

Resource Policies

The natural resources of the District, the lands, waters, vegetation, wildlife, and historical and cultural resources, are the fundamental features from which all park planning and development begin. The following policies are designed to reflect the importance of these resources and to provide guidelines for their protection, enhancement, utilization and management.

1. Vegetation Management

The District will maintain and enhance vegetation for its own intrinsic value, as important wildlife habitat, and will use state-of-the-art practices to provide optimum conditions for public recreation and enjoyment in appropriate areas. To that end the District will develop and maintain a tree hazard program. Agriculturally designated weedy plant species that degrade the land and recreational use values will be managed when and where appropriate.

2. Habitat Restoration

The District may designate appropriate areas for restoring or reclaiming lost or altered natural biotic communities, such as wetlands, grasslands, or riparian woodlands for their intrinsic wildlife and educational values.

3. Wildlife Policy

The District will conserve wildlife populations to foster native species and to protect or increase the populations of endangered species. Following the principles of integrated pest management, the District will control health or safety conflicts between humans and wildlife.

4. Endangered Species

The District will protect and maintain plants and animals and their habitats that are officially listed under state or federal Endangered Species acts and those species that a competent authority has proposed for such listing such as threatened species and species of special concern.

5. Fisheries Management

The District will operate a variety of freshwater and saltwater fisheries and will allow fishing in accordance with both state regulations and District ordinances.

6. Water Management

The District will maintain the necessary quality and quantity of water in streams and lakes to provide plant communities, suitable wildlife habitat, and recreation values.

7. Soil Management

The District will construct and maintain its roads, trails, and other improvements to avoid erosion and soil failure. The District will include an erosion-control plan as part of all capital-improvement projects that involve substantial soil disruption. Trails, roads, and

other park improvements will be designed to avoid or minimize impacts on sensitive wildlife habitats and rare plant populations.

8. Historic and Cultural Resources

The District will protect and maintain historic buildings or cultural resource sites within its lands. The District may acquire historic buildings or cultural resource sites when they lie within a larger area that meets the parkland classification criteria. The District will preserve cultural resources "in situ" whenever feasible. After consulting with recognized authorities and groups, the Board will adopt a reinterment plan for the remains of Native Americans and their associated artifacts.

9. Energy Resources

The District will conserve nonrenewable energy resources to the greatest practical extent. It will periodically study alternative systems and strategies to reduce energy consumption. The District will not develop or permit any development of energy resources on its lands that is not compatible with park purposes.

10. Hazardous Materials

The District will protect the environment and the health and safety of its staff and park users from hazardous materials. The District will require all contractors and concessionaires who use hazardous materials to certify that they operate in accordance with the regulations of the state and federal offices for the Occupational Safety and Health Administration (CALOSHA/OSHA) and to provide copies of all relevant CALOSHA/OSHA inspection reports.

11. Encroachment on Parklands

The District will seek to eliminate or minimize any adverse effects on parkland or proposed land use on adjacent property. The District will plan an active educational role in working with adjacent property owners and public agencies regarding the means and necessities for protecting wildland resources.

Pages 4 and 5 of the Master Plan - 1988

Field Research Units

The selected areas within regional parklands called Field Research Units encourage faculty or advanced students of universities, colleges, and other research organizations within the District to conduct ongoing or periodic studies and assure these persons of the long-term status of such use.

Upon recommendation from appropriate park, planning, and resource management staff, the General Manager will issue a permit to use a Field Research Unit for research or group education. This permit may include strict limitations on the alteration, disturbance, or removal of plants, animals, or any other natural features that are present in the area.

Page 16 of the Master Plan - 1988

E. DISTRIBUTION LIST

Over 1,700 people received summaries of the draft and revised Tilden Land Use-Development Plan/Environmental Impact Report.

A full copy of the Draft Land Use-Development Plan/Environmental Impact Report was sent to:

Organization	Name	City
AC Transit	Peter Tannen	Oakland, CA
ACE Construction	John Allen	Oakland, CA
Access California		Oakland, CA
Alameda County Water District	James Beard	Fremont, CA
Alameda-Costa Center for Dev. Disabled		Berkeley, CA
Albany Public Library		Albany, CA
Audubon Society,	Marion Craig	Berkeley, CA
Audubon Society, Golden Gate	Steve Granholm	Albany, CA
Audubon Society, Golden Gate	Art Feinstein	Berkeley, CA
Berkeley Bicycle Club	David King	Berkeley, CA
Berkeley Design Associates	Douglas Wolfe	Berkeley, CA
Berkeley Public Library		Berkeley, CA
Berkeley Shakespeare Festival	Myrna Walton	Berkeley, CA
Berkeley, City Council	Shirley Dean	Berkeley, CA
Berkeley, Planning Dept.	Marjorie Macris	Berkeley, CA
Berkeley, Planning Dept.	Sylvia Toth	Berkeley, CA
CNPS	Paul Covell	Oakland, CA
CNPS	Patricia Allen	El Cerrito, CA
Calif. State Clearinghouse	Price Walker	Sacramento, CA
Calif., Dept. of Forestry	Joe McBride	Berkeley, CA
California Native Plant Society	Linda Price	El Cerrito, CA
Castro Valley Horsemen's Association		Castro Valley, CA
Center for Independent Living, Inc.	Dave Lewis	Berkeley, CA
Chabot Science Center	Kingsley Wightman	Oakland, CA
Citizens for Urban Wilderness Areas	Glen Seaborg	Oakland, CA
Citizens for Urban Wilderness Areas	Roger Reve	Oakland, CA
Clayton Horsemen's Association	J. Hulegaard	Clayton, CA
Computerized Grant Writing	Robert Penkivich	Martinez, CA
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Contra Costa Co., Public Works	Leroy Vukad	Martinez, CA
Contra Costa Hills Hiking Club	G. V. Halloran	Oakland, CA
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EBATC	Bob Walker	San Francisco, CA
EBRPD, Archery Advisory Committee	Al Oppocher	San Leandro, CA
EBRPD, Board of Directors	James Duncan	Alameda, CA

EBRPD, Board of Directors	Mary	Jefferds	Berkeley, CA
EBRPD, Board of Directors	Harlan	Kessel	Oakland, CA
EBRPD, Board of Directors	John	O'Donnell	Castro Valley, CA
EBRPD, Board of Directors	Ted	Radke	Martinez, CA
EBRPD, Board of Directors	Jocelyn	Combs	Pleasanton, CA
EBRPD, Board of Directors	Kay	Peterson	Lafayette, CA
EBRPD, PAC	Marie	Cronin	Hayward, CA
EBRPD, PAC	Joyce	Davis	Pinole, CA
EBRPD, PAC	Kay	Kerr	El Cerrito, CA
Earth First			Canyon, CA
East Bay Bicycle Coalition	Richard	Day	Hayward, CA
East Bay Bicycle Coalition	John R.	Kerr	Oakland, CA
East Bay Heritage Trails	George	Cardinet	Concord, CA
East Bay M.U.D.	A.	Bonner	Oakland, CA
East Bay M.U.D.	Jerome B.	Gilbert	Oakland, CA
Ecology Center Newsletter	Karen	Pickett	Berkeley, CA
Fairmont-Lake Chabot Ridgeland Comm.	Gary	Zimmerman	Castro Valley, CA
Federation of Western Outdoor Clubs	Winchell	Hayward	San Francisco, CA
Friends of Tilden Park	Hans	Baruch	Berkeley, CA
Friends of Tilden Park	Arthur &	Bunn	Berkeley, CA
	Nelly		
Friends of Tilden Park	Joseph E.	Levy	Berkeley, CA
Friends of Wildcat Canyon	Alan	LaPointe	Richmond, CA
Friends of the Earth	Dan	Luten	Berkeley, CA
Golden Gate Live Steamers	Ken R.	Johnson	Danville, CA
Greenbelt Congress	Mark	Evanoff	San Francisco, CA
Hayward Area Recreation & Park District	Wesley	Sakamoto	Hayward, CA
Hayward Daily Review			Hayward, CA
Intertribal Friendship House			Oakland, CA
Kensington Public Library			Kensington, CA
Mt. Diablo Council	Bill	Spaulding	Walnut Creek, CA
North Berkeley Senior Center	Susan	Ryan	Berkeley, CA
North East Berkeley Association	Jack	Washburn	Berkeley, CA
Oakland Dev. Center for the Handicapped			Oakland, CA
Oakland Main Public Library			Oakland, CA
Off-Road Bicycle International Society	Jack	Ingram	Lafayette, CA
Orinda, Planning Dept.	Wayne	Rasmussen	Orinda, CA
Panoramic Hills Association	Ann	Slaby	Berkeley, CA
Redwood Valley Railway Corp.	Erich	Thomsen	Berkeley, CA
Regional Parks Association	Margo	Gwinn	Berkeley, CA
Regional Water Quality Control Board	Warren	Tom	Oakland, CA
Rotary International	Jack	Mahshi	Berkeley, CA
San Fran. Bay National Wildlife Refuge			Newark, CA
Save the Hills Association	Vic	Cassman	Berkeley, CA
Save the Hills Association	May	Blos	Berkeley, CA
Sierra Club,	Allen	Carlton	Oakland, CA

Sierra Club,
 Sierra Club, SFBay Chapter
 Tilden Park Golf Course
 Tilden Park Merry-Go-Round
 Tilden Pony Ride Operations
 Tilden-Wildcat Horseman's Association
 Tilden-Wildcat Horseman's Association
 Tri-City Ecology Center
 Trust for Public Land
 U.C. Berkeley,
 U.C. Berkeley,
 Urban Ecology
 Whole Access

Kathy	Stein	Berkeley, CA
Ellen	Barth	Berkeley, CA
Gill	Flynn	Berkeley, CA
Harry	Perry	Berkeley, CA
Steve	Thompson	Castro Valley, CA
Es	Anderson	Berkeley, CA
Juliet	Moss	Orinda, CA
Donna	Olsen	Fremont, CA
Bryan	Holley	San Francisco, CA
Robert	Stebbins	Berkeley, CA
James	Deetz	Berkeley, CA
Richard	Regirter	Berkeley, CA
Phyllis	Cangemi	Redwood City, CA

Name

City

Diane	Bennett	Berkeley, CA
Harold & Ruth	Biswell	Berkeley, CA
Charles & Felicia	Bock	Berkeley, CA
Terry	Braun	Berkeley, CA
Ric	Catron	Oakland, CA
Jeanette	Dunn	Oakland, CA
Rainer	Fehr	Berkeley, CA
Jenny	Fleming	Berkeley, CA
Sarah Jo	Gilpin-Bishop	Berkeley, CA
Jim & Eva	Goodwin	Berkeley, CA
Megan	Gregory	Berkeley, CA
Linda	Hobbet	Berkeley, CA
Beth C.	Kennedy	Berkeley, CA
Harry	McMasters	Berkeley, CA
Milton & Dorothy	Mozen	Berkeley, CA
Harry	Pallack	Berkeley, CA
Craig	Peterson	Berkeley, CA
Linda	Price	El Cerrito, CA
Dayna J.	Salter	Berkeley, CA
Aileen	Schulz	Berkeley, CA
Mike	Sewell	Berkeley, CA
Stephen	Volker	Berkeley, CA
Carol	Weinmann	Berkeley, CA
Catherine	Willis	Berkeley, CA
Jeffrey	Zimmerman	Oakland, CA

F. PUBLIC COMMENTS AND RESPONSES

Comments on the Draft Land Use-Development Plan/Environmental Impact Report were received through public hearing testimony and letters. A public hearing was held at the Martin Luther King Junior High School auditorium on March 24, 1988. Approximately 200 people attended representing environmental groups, equestrians, hikers, concerned neighbors and other interested parties. The following is a summary of comments and corresponding responses. The many comments in support of various aspects of the Plan are appreciated, but are not included this discussion. Comments concerning issues other than the Land Use-Development Plan/Environmental Impact Report are not discussed.

CHAPTER III LAND USE-DEVELOPMENT PLAN

B. NATURAL RESOURCES MANAGEMENT PLAN

General

Comment: 1. The resource management policies presented are much too vague and give little data on the time required to achieve major projects, expenses anticipated, or even, in many cases, specific delineation of the actions to be undertaken.

Response: A policy is defined as a "course of action" and is necessarily general. The "Required Actions" in the NRMP give more specific directions to these policies. However, uncertainties about future funding and availability of staff preclude the kind of specificity which commentators are requesting.

Comment: 2. Visitor use management should be part of resource management.

Response: Comment noted.

Comment: 3. You need to prioritize your resource management projects.

Response: Priorities for action have been included in the NRMP.

1. Vegetation

Comment: 1. Wildcat Creek riparian corridor as a Special Protection Unit is a much needed proposal. In some areas, heavy use by bikes, horses and walkers have eroded and stripped the banks. It may be wise for habitat regeneration to restrict use and to replant vegetation. In addition, the section through the Golf Course to be reclaimed as riparian habitat may be threatened by the pedestrian path to be developed next to it.

- Response:** The Plan has been amended to include either temporary or permanent physical barriers to areas undergoing grassland restoration.
- Comment:** 2. Before prescribed fire is used as a brush control method, there should be further consultation with the academic community on the variables such as time of year, hazard to animal species, and how to avoid having exotics dominating the new growth.
- Response:** Staff continually reviews current scientific literature in these matters; to the degree that fire is used to change the vegetation type, those animals which live in the vegetation that is reduced in extent will decline in numbers, similarly those animals which are dependent upon the new vegetation (growing in the burned area) will increase. Exotic grasses now dominate California grasslands. There is no recognized method of excluding them.
- Comment:** 3. Coast redwoods were not present in historic times in the Berkeley hills and are incongruous on high, dry hillsides. If they must be planted, they fit better into lower contours as in canyon bottoms with adequate natural water.
- Response:** Coast redwoods are proposed to be planted in moist canyons and swales, not high, dry hillsides.
- Comment:** 4. Coyote brush should not be cleared out. It is a native plant. Perhaps in the historical past the hills were grassland, but at the present time there is a population of small animals that are dependent on the brush for their habitat. By removing the coyote brush you will remove their protection and in effect destroy these animals.
- Response:** Maintenance of a mixture of grassland and brushland is an important part of the proposed program to manage Tilden Park in such a way as to support a diverse and abundant wildlife population. The Plan proposes restoration of grassland on certain south or west facing slopes, now dominated by coyote brush, where such restoration is considered feasible. This amounts to only about 10 to 15% of the coyote brush now extant in the Park.
- Comment:** 5. The Draft Plan does not propose specific measures to achieve maintaining healthy plant communities and wildlife habitat.
- Response:** The principles in the LUDP serve as the guidelines for future capital expenditure. Specific measures to carry out these principles are too detailed for a general plan such as this. Specific management methods will be developed at the time capital projects are formulated as provided in the District's Master Plan 1988.
- Comment:** 6. The Draft Plan proposes two management tools-prescribed burning and goat grazing-which may have significant adverse effects on Tilden's natural resources, particularly in the long term. Prescribed burning may result in a number of undesirable impacts

- Comment: 18. "Native trees will be planted in the fuelbreak and at new parking areas to provide screening from automobiles" should be revised to read "Low fuel producing native trees will be planted..."
- Response: This language has been added to the text.
- Comment: 19. If the listed management techniques are employed in the Natural Area, purposes, extent and impact upon the area should be discussed in the text.
- Response: The referenced statement is a general one from the District's Master Plan.
- Comment: 20. Paragraph 2 on page 31 should be rewritten to give a more complete discussion about policies and problems concerning indigenous and non-indigenous species and plant succession.
- Response: A more complete discussion occurs in the referenced document, EBRPD's 1978 Board adopted Vegetation Management Policy.
- Comment: 21. "Where conversion from non-indigenous to indigenous vegetation is feasible within a reasonable effort, conversion, or action towards conversion, is recommended" is a vague statement and of little value.
- Response: The existing statement is adequate for a planning document.
- Comment: 22. Consider dividing your areas on the basis of watershed and subwatersheds, rather than aspect. This relates better to land management and its influences.
- Response: This has been considered, and for vegetation management purposes, aspect was found to be the most practical method of dividing the Park. The statements about work effort and feasibility are based upon extensive District experience with attempting to undertake major changes in vegetation; particularly with eucalyptus.
- Comment: 23. Is the detailed management for the fuelbreak project activity, started in 1982, still in draft form?
- Response: Yes.
- Comment: 24. Indicate that both policy and objectives provides in their guidance of management activities.
- Response: Policy and objectives are both stated in the LUDP.
- Comment: 25. "The fuelbreak will be retained, although certain areas of brush will be permitted to recover" is vague. Explain the erosional consequences that can result from goat grazing.

- Response:** Such testing and monitoring is a part of the management plan.
- Comment:** 11. Allowing brush to recover seems to be a step backward.
- Response:** Certain areas within the fuelbreak contain stands of leatherwood, ninebark, and other moisture-loving plants; these are the areas that will be permitted to recover. Also, minor stands or thickets of poison oak or other shrubs, which provide wildlife cover and do not compromise the fuelbreak, will be allowed to remain.
- Comment:** 12. There is no evidence of native tree species growing as understory.
- Response:** The Golf Course trail area shows ample evidence of native tree species in the eucalyptus forest understory.
- Comment:** 13. Grassland areas undergoing restoration should be reseeded with perennial grasses.
- Response:** The District has experimented with native perennials grasses. At this time they are not available in commercial quantities but staff will continue to examine this issue.
- Comment:** 14. Required thinning of young eucalyptus will allow poison oak to grow.
- Response:** Poison oak is not the only native plant in the eucalyptus understory. The understory of eucalyptus forests includes a persistent stand of wild rye grass and other native plants which can be expected to gain vigor from eucalyptus thinning.
- Comment:** 15. There is no evidence that burning Ridgetop Meadow will remove brush.
- Response:** There is evidence that burning can remove brush. Additionally, a second purpose of burning here is to remove herbaceous thatch accumulations.
- Comment:** 16. How are special protection units delineated?
- Response:** The boundaries of the Special Protection Units are coterminous with the distribution of the feature of concern and its immediate surroundings (e.g. overhanging shade). The notable species do not require this identification because they do not have management needs that differ from their surroundings (see page 42 of the LUDP).
- Comment:** 17. It is essential to consider entire watersheds in order to determine how the activities on adjoining lands impact your Park and also to see how your activities may impact other land uses downstream.
- Response:** This is part of the analysis in the EIR and a recommended plan priority.

- Comment: 18. "Native trees will be planted in the fuelbreak and at new parking areas to provide screening from automobiles" should be revised to read "Low fuel producing native trees will be planted...".
- Response: This language has been added to the text.
- Comment: 19. If the listed management techniques are employed in the Natural Area, purposes, extent and impact upon the area should be discussed in the text.
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- Comment: 23. Is the detailed management for the fuelbreak project activity, started in 1982, still in draft form?
- Response: Yes.
- Comment: 24. Indicate that both policy and objectives provides in their guidance of management activities.
- Response: Policy and objectives are both stated in the LUDP.
- Comment: 25. "The fuelbreak will be retained, although certain areas of brush will be permitted to recover" is vague. Explain the erosional consequences that can result from goat grazing.

- Response:** Current goat management practices have not resulted in serious erosion problems.
- Comment:** 26. Fostering native shrub and tree establishment within and around existing eucalyptus stands and allowing the replacement of eucalyptus by native understory is not sound policy for eucalyptus management.
- Response:** Removal of eucalyptus will provide native understory the opportunity to become the dominant vegetation, an objective which is stated in the NRMP.
- Comment:** 27. The District should have a policy which permits indigenous plant species in areas where the natural environment has been altered and is being restored. In some areas non-indigenous species can be legitimate, if they fulfill the need or objective better than indigenous species. Give indigenous species preference if benefits can be equally met.
- Response:** This is the policy presented in the NRMP.
- Comment:** 28. Define what you are trying to accomplish, besides fire protection, in the fuelbreak area. Other uses are possible which are compatible. Aesthetic considerations are essential.
- Response:** An effective fuelbreak is located based upon topographical and ownership considerations. In Tilden, the steepness of the fuelbreak largely prevents concentrated recreational use (e.g., picnicking). However, trail use is compatible and trails exist along the fuelbreak. The fuelbreak also occupies a buffer position between the activity areas of the Park and the adjacent residential areas. Because of its potential visual buffer role, this plan includes tree plantings to provide screening both into and out of the Park. Such plantings will be undertaken on an opportunity (donation) basis. Species composition in the fuelbreak will also provide wildlife cover and not jeopardize its effectiveness.
- Comment:** 29. Explain the Vollmer Peak problem and solutions more adequately. Preventing wildfire in eucalyptus groves requires careful thought and planning.
- Response:** The Vollmer Peak eucalyptus were severely top-killed in the 1972 freeze and now pose a safety hazard along trails and the Vollmer Peak access road. The goal is to remove that safety hazard. Monterey pines are a significant species in this area as well. The Plan includes maintenance of existing grassland by removal of coyote brush in certain areas or by burning.
- Comment:** 30. Will a native plant understory establishment do what you want in eucalyptus stands near Lake Anza? Design management so as to avoid removal of native trees (not just mature ones). Mention more specifically riparian area management objectives and methods.

- Response:** Enhancement of native understory is proposed, and is currently happening within the eucalyptus stands. It should be noted that this area is proposed for improvements related to circulation for the Lake Anza swimming area. Therefore, the plan emphasizes saving of mature native specimens as opposed to immature native or any exotics. The riparian unit will not be altered in this area.
- Comment:** 31. Is promoting native vegetation beneath the eucalyptus by occasional thinning within the groves a sound approach? Include tree regeneration in your protection, not just mature ones.
- Response:** Observations indicate that this technique will allow regeneration of native species to take place naturally.
- Comment:** 32. State problems regarding the effect of landscaping on native riparian vegetation and the potential for stream degradation from runoff of pesticides and fertilizers used to maintain the landscaping.
- Response:** There is a concern, but no scientific evidence for, possible damage to the fishery or to Lake Anza from landscape maintenance activities at the Golf Course. An integrated pest management plan for the Golf Course is currently being developed and is expected to reduce pesticide and fertilizer use.
- Comment:** 33. Give details, or refer to a report, covering implementation of a specific Alameda manzanita recovery plan in coordination with other agencies. Define the EBRPD role in this recovery.
- Response:** This has been done.
- Comment:** 34. Indicate the development of specific protection and recovery plans for Oakland mariposa and the rock daisy.
- Response:** This is described on page 42 of the LUDP; the rock-daisy habitat is secure and requires no special management.
- Comment:** 35. In the absence of maintenance, mature conifer groves will be infested by bark beetles which will eventually increase mortality in pine groves along San Pablo Ridge and on either side of San Pablo Reservoir. EBRPD should either maintain the groves by removing and burning infected trees, or clearcut abandoned groves and replant with acceptable native species.
- Response:** The text has been amended to reflect this concern.
- Comment:** 36. Additional redwoods should not be planted in Tilden. They change habitat, create dense shade and can become outsized and out of proportion to the scale of the landscape in this park. Open space and sunlight are higher priorities.

- Response:** Redwoods are only proposed to be used in peripheral sites, or sites where topography tends to minimize their scale (see Vegetation Policy). Redwoods have been notably free of understory fuels. Redwoods can accomplish the twin goals of visual improvement and fire prevention.
- Comment:** 37. "Other non-indigenous plants" (page 118) should include pampas grass.
- Response:** Pampas grass has been added on page 122.
- Comment:** 38. The Plan calls for maintenance of the large sedge meadow south of Laurel Creek by preventing intrusive brushy type vegetation. The means suggested are brush cutting and prescribed fire. Will these management practices negatively impact the habitat of the common "ladybug"?
- Response:** "Ladybugs" typically assemble in warm sections in canyons of rivers and creeks during the late fall where they crawl under leaves and plants to hibernate. Brush cutting or prescribed burning during the summer when the population is dispersed will not interfere with fall hibernation or spring migration
- Comment:** 39. The Alameda manzanita management strategy needs to be made clearer if native vegetation (e.g., oaks) will be removed.
- Response:** The recovery plan for the Alameda manzanita includes occasional thinning or removal of overstory affecting the manzanita regardless of its origin. The manzanita is an endangered species and warrants protection. Removal of some oaks to achieve management goals for the endangered manzanita will not have a significant impact on the oak flora.
- Comment:** 40. How often will brush be removed from upper San Pablo Ridge by prescribed burning?
- Response:** The NRMP includes management to maintain a mixture of grass and brush, not brush removal. Prescribed fire will occur as required; no timetable has been set.
- Comment:** 41. Wildland resources must not be jeopardized when protecting against encroaching vegetation.
- Response:** Comment noted.
- Comment:** 42. What plants are considered "indigenous"?
- Response:** This is defined in detail in the District's adopted "Principles and Policies of Vegetation Management" (EBRPD, 1978). It is a plant which occurs naturally on similar sites.
- Comment:** 43. "Enhancement of significant resources". The word "enhancement" used here and elsewhere causes a naturalist feelings of anxiety.

Ecosystems are always far more complicated than we think they are. What is to be "enhanced", and at what costs to other elements in the system? What are "significant resources"? Who decides?

Response: The enhancements involve proven vegetation management methods; individual vegetation management projects will be undertaken by District staff with advice from members of the academic community.

Comment: 44. Has there ever been prescribed burning of the fuelbreak? If done, will it not encourage the spread of poison oak that often thrives following burns?

Response: Prescribed fires in the fuelbreak are not anticipated to increase poison oak.

Comment: 45. The spread of broom is a growing problem in the fuelbreak. It should be chopped down each year before it goes to seed until root systems are exhausted and the plant dies out. Now is the time to do it this year.

Response: Comment noted.

Comment: 46. It is stated that there is to be maintenance of pine and eucalyptus stands by occasional thinning. Their remote and isolated nature poses little fire hazard and human intrusion will disturb wildlife. What will be gained by thinning?

Response: Occasional thinning will encourage indigenous species within these groves and work toward their eventual conversion to indigenous stands.

Comment: 47. What is the "mechanical" means to be used in removing eucalyptus sprouts? Heavy equipment could cave in animal burrows and disrupt the forest litter.

Response: The term "sprouts" is perhaps inappropriate here. Large, dead, standing eucalyptus trees require some mechanized equipment to effect their safe removal. Because this activity would not be continual, wildlife which live in burrows and in the forest litter will be able to recognize the disrupted areas.

Comment: 48. It is proposed to occasionally remove forest litter from the eucalyptus groves in Sweetbrier. This will cause significant disturbance to wildlife populations that now extensively use the eucalyptus groves - newts, treefrogs, ground nesting birds (juncos), small mammals, and the invertebrate life upon which many of these and other animals depend. So far as I'm aware, such management has never been conducted in the big blue gum grove of the Nature Area, with which I have been acquainted for some 40 years. This is probably an important reason why wildlife populations are so rich in this grove. If fire control concerns

prevail, and I don't see why they should in groves well removed from human habitation, then a "checkerboard" approach should be used, leaving many undisturbed patches, while at the same time breaking up continuity of the litter to impede wildfire spread.

Response: Comment noted. Text has been revised to include "checkerboarding" and monitoring of results of the activities.

Comment: 49. Removal of litter in eucalyptus groves by prescribed burning does not appear to be a viable alternative because of the high flammability of these groves.

Response: Prescribed fires will be set at times of the year when the litter is dry but the living trees are moist.

Comment: 50. The prescribed burning of Sedge Meadow south of Laurel Creek would most likely stimulate the spread of poison oak.

Response: The occasional hand removal of brush or burning will improve vigor of the sedges.

Comment: 51. There does not appear to be an accumulation of standing dead branches in brushlands as stated on page 117.

Response: The area southeast of the old Model Airplane Field shows ample evidence of senescent coyote brush; other areas show it less dramatically.

Comment: 52. As a result of goat grazing, are we getting selection for thistles? What is the effect of goat droppings on water quality?

Response: Evidence indicates that the current goat grazing practices are not very effective in managing for different herbaceous species, although it is very effective in brush control. There is no evidence of significant water quality impacts due to goat droppings.

Comment: 53. Retention of the fuelbreak is essential, but it looks like a disaster area. Can't something better be done?

Response: The plan includes visual improvement of the fuelbreak. See proposed addition, page 34, paragraph 3, plus discussions of planting and brush recovery in the Fuelbreak section of the Plan.

Comment: 54. At what time of the year are the required actions listed in the Natural Resources Management Plan scheduled? Controlled burning, grazing, foot traffic and mechanical actions could be fatal to the plant populations they are designed to protect if timed at the wrong state of their natural history, especially in atypical years. Is there provision for pre-and post-operation monitoring? What role do stewardship staff biologists take in scheduling management activities?

Response: Prescribed burning is scheduled for the summer and fall, or until rains preclude effective burning. Goat grazing is generally undertaken in the spring and summer. Both operations would be monitored, and with resource management staff as full partners in the planning of these operations.

Comment: 55. The 1988 Master Plan states that restrictions applicable to the special Protection Units will be stated in individual park plans. No restrictions are stated on page 5, although it would be appropriate. Special Protection Units, as defined on page 5, should allow for additional units to be added as data suggests.

Response: Page 5 is a summary of the Plan; Special Protection Unit restrictions are given through policies and required actions specific to individual units.

Comment: 56. Please clarify "native forest".

Response: The term "indigenous" rather than "native" is the correct term here and is clarified in the background section of the vegetation section of the NRMP.

Comment: 57. "Plant native trees in appropriate areas of the fuelbreak..." should be revised to read "plant locally native trees..."

Response: The term indigenous is more appropriate here and has been added to the text.

Comment: 58. The following statement should be inserted between the two paragraphs under Required Actions (Area 2, Upper Berkeley Hills):

"An exception to the native plant policy is:"

Response: The suggested change in wording is unnecessary.

Comment: 59. Change Required Action for Area 4 to read as follows: "The District will maintain and restore selected areas of grassland by mechanical means or prescribed burning consistent with recommendations of staff biologists."

Response: This language has been inserted.

Comment: 60. The Required Action on the sedge meadow should be amended to read: "The District will maintain the large sedge meadow south of Laurel Creek by brush cutting and prescribed burning at those times recommended by stewardship staff biologists."

Response: Additional language has been inserted.

Comment: 61. Required action activities must be carefully timed to avoid destruction of the species they are designed to enhance. Quantitative observations prior to management activities and

monitoring the stage of growth of the special element prior to action should be required.

Response: These cautions are noted. The NRMP includes sufficient policies to assure that they will be observed.

Comment: 62. The following statement should be inserted under Notable Species, page 42. "Use plans, trail placements, and alterations to management practices shall be evaluated for impacts to these notable species."

Response: This language has been inserted.

Comment: 63. Why is leatherwood not in Special Protection Units?

Response: Management of leatherwood does not differ from its surroundings, therefore, special management is not required.

Comment: 64. Amend the vegetation management section addressing required action for the mechanical clearing of artichoke thistle to include before seed development.

Response: Mature seed head removal will be performed before any mechanical, physical or chemical means are implemented to reduce plant populations in identified problem sites. Seed head removal is specified in the text as a vegetation management tool.

Comment: 65. Retain native species in natural areas and indigenous where appropriate in developed sites with clear policy stated.

Response: Comment noted.

Comment: 66. A clear statement needs to be made concerning pest management activities in right-of-way and utility corridors by private and public utility organizations in Tilden Park.

Response: The issue of vegetation management in right-of-way, utility corridors and easements is a District-wide pest management concern. Board policy addresses this issue and is found in the 1987 Pest Management Policy and Practices document. The policy advocates a cooperative working relationship with both private and public utility organizations and their contractors.

Comment: 67. Should there not be a mechanism for adding Special Protection Units or Educational Use units to the Park plan as especially good representative examples of natural plant communities and wildlife habitats are identified and catalogued?

Response: The Board can amend the Plan to include Special Protection Units and Field Research Units whenever the need arises.

- Comment: 68. Restrictions for Special Protection Units should properly be included in your discussion of these units for consistency with page 19 of the 1988 Draft Master Plan. Use plans, trail placements, and alterations to management practices must be evaluated for impacts on these Units, and facility buffering must be considered.
- Response: This is the purpose of including Special Protection Units in the LUDP.
- Comment: 69. The last paragraph on page 5 should be changed to: "The fuelbreak will be maintained as grassland or other vegetation of low fuel volume or relative fire resistance. Negative visual impacts of fuel break maintenance will be softened by planting fire resistant trees or shrubs in appropriate areas."
- Response: The existing text adequately reflects the commentors concerns.
- Comment: 70. Figure 8 shows the fuelbreak plantings as very extensive along Wildcat Canyon Road.
- Response: The map has been changed.
- Comment: 71. On page 34, check on the statement that the fuelbreak is approximately 150 acres.
- Response: That is correct.
- Comment: 72. Change the last sentence in paragraph 1, page 34, to read: "In Tilden, the fuelbreak was constructed along the southwest boundary of the Park from South Park Drive to Canon Drive."
- Response: The suggested change in wording is unnecessary.
- Comment: 73. Change last paragraph to read: "...Move second sentence--screen plantings--to next policy/required action. Regular grassland maintenance will be accomplished through goat grazing, mowing, prescribed burning, or other suitable means. Resprouting eucalyptus will be removed."
- Response: The text has been changed.
- Comment: 74. Change your first policy statement on page 35 to read: "The visual impact of the fuelbreak will be ameliorated by planting fire resistant trees and shrubs in appropriate areas."
- Response: This has been done.
- Comment: 75. Some of the 160 acres is your Upper Berkeley Hills vegetation unit may actually be in the fuelbreak.
- Response: Adding Frowning Ridge to Figure 9 corrects this error. Other perceived errors are due to the limits of schematic mapping.

- Comment:** 76. Change your Upper Berkeley Hills policy to include the replacement of aging Monterey pines by indigenous understory.
- Response:** The text has been changed.
- Comment:** 77. Memorial plantings should be allowed at the former archery range site and northward; not just in the fuelbreak.
- Response:** The wording suggested is not significantly different from the text as written.
- Comment:** 78. In addition to areas cited on page 40, Alameda manzanita also occurs in some areas of the fuelbreak.
- Response:** The statement that the commentor is referring to is broad enough to include occurrences within the fuelbreak. Their presence here is not in conflict with fuelbreak management.
- Comment:** 79. Allow for chemical treatment of eucalyptus during removal (i.e., stump treatment with Roundup) on the immediate slopes of Vollmer Peak.
- Response:** This approach is not necessary here.
- Comment:** 80. Who will maintain the eucalyptus grove referred to in Area 4?
- Response:** The EBRPD staff will carry out (or contract for) all maintenance specified in the NRMP.
- Comment:** 81. Are Oakland star-tulip and Oakland mariposa the same? This is unclear in the text.
- Response:** Yes, they are the same. The text has been changed accordingly.
- Comment:** 82. Rock daisy outcrops are not shown in Figure 10. Are the Alameda manzanita locations given correct?
- Response:** The figure has been changed to address both concerns.
- Comment:** 83. Alameda striped racer habitat is shown in Figure 10, not Figure 7.
- Response:** This correction has been made in the figure.
- Comment:** 84. Do you really plan to stabilize gully embankments on active landslides?
- Response:** No. The text has been changed.

2. Wildlife

Comment: 1. The NRMP should be more specific about the roles of California Department of Fish and Game and EBRPD in wildlife management.

Response: The text (page 44, paragraph 1) has been reworded.

Comment: 2. The description of the monitoring of wildlife species should be more specific.

Response: The text of the Natural Resources Management Plan has been augmented to do this.

Comment: 3. There should be a rewritten discussion of the applications of prescribed burning giving greater detail.

Response: Prescribed burning is one of several management practices which may be used to carry out the policies of the NRMP. The appropriateness of the policies is of paramount importance; not the details of how these will be accomplished.

Comment: 4. The Plan should protect wildlife and native plant resources fully throughout the Park, not just in Special Protection Units. Further, there is insufficient biologic information to delineate Special Protection Units with needed buffer areas.

Response: The Land Use Development Plan and the Natural Resources Management Plan recognize that portions of the Park are and will remain developed for recreation purposes. Therefore, these areas are not planned to be managed primarily to provide plant and wildlife habitat. The delineation of Special Protection Units provides identification of places within the "natural" areas of the Park where normal management practices are to be altered to protect and manage an identified unique resource. As other unique resources are identified, additional Special Protection Units may be added to the Plan. The mapping of Special Protection Units is generalized and allows for sufficient buffer areas.

Comment: 5. Fauna is treated superficially on page 159, yet it is important.

Response: The page in question is a quote from the District-wide Master Plan 1988; this is updated from the quote given in the draft LUDP and is given in an appendix as a reference for the reader.

Comment: 6. The Natural Resource Management Plan, and the Land Use Development Plan are proposed without an adequate inventory of plant and animal life.

Response: The Park staff, with input from professional biologists, is undertaking a detailed investigation of the Park's wild plant and animal resources.

- Comment:** 7. On page 28, the Plan states "Forest and Land Management...may be used to maintain or recreate the desired environmental setting." This kind of environmental alteration should be carried out with consideration about wildlife and after careful study.
- Response:** This policy is from the EBRPD Master Plan and merely sets the District-wide policy which provides the authority for the Natural Resource Management Plan which follows.
- Comment:** 8. The Natural Resource Management Plan should consider a variety of vertebrates in addition to the Alameda striped racer and the trout.
- Response:** The primary wildlife management methodology proposed in the Natural Resource Management Plan is the management of vegetation to provide a variety of habitats supporting rich and varied wildlife populations. Specifically, new pine plantations which support a low number of species are not part of the NRMP. Restoration of riparian habitat, construction of seasonal wetlands and maintenance of a mixture of grassland and brushland (as opposed of pure stands of each) are all part of the NRMP because they would contribute to the wildlife habitat objectives. Specific management practices are given for the Alameda whipsnake and the trout because these species enjoy special protection conferred by the State of California, and because these practices vary somewhat from "normal" management of the natural areas in the Park.
- Comment:** 9. Vegetation management of the alkaline spring may adversely effect the rare rubber boa.
- Response:** The prescribed management practices are intended to prevent the filling in of this wetland habitat by debris from eucalyptus trees, thus preserving the habitat for the rubber boa.
- Comment:** 10. Restrictions on public use should be included in the protections specified for Special Protection Units.
- Response:** Resource consumptive activities (e.g., hunting, fishing, plant collection) are either limited or prohibited on a District-wide basis; not just in special protection units.
- Comment:** 11. Migrating newts are killed (some years in large numbers) by vehicles on South Park Drive, in the Indian Camp parking lot and by bicycles along the trails in Sweetbrier Canyon. These roads and trails should be closed (perhaps seasonally) because of this.
- Response:** South Park Drive bisects the route taken by California newts during their fall and early spring migrations. Large numbers of newts cross South Park Drive sporadically, usually for short periods of time following heavy rains, between the months of October and April. During these periods newts are killed by automobiles using South Park Drive. While newt losses have occurred each year for as long as South Park Drive has existed, the impact of these losses on overall newt

populations is unknown. The District will initiate a long-term study of the newt population to determine their status and, in the meantime, prepare a plan to initiate periodic closure of South Park Drive.

Comment: 12. Ducks may be "impacting" newts and treefrogs; their numbers should be limited and their wings clipped to reduce mobility.

Response: Feral domestic ducks are included in a policy of live-trapping and removal. Since "wing clipping" requires live-capture, and since State, County and District ordinances prohibit the release of a captured domestic animal, this method of management is not available.

Comment: 13. The Natural Resources Management Plan calls for live-trapping and removal of feral cats. The reports of summer intern work at the Nature Area advocate capture, sterilization, and release of feral cats on the theory that territorial behavior will minimize the cat population.

Response: The summer intern work is based upon a theory about territoriality; however, the territorial behavior of cats breaks down in areas where ample food is regularly available (e.g., picnic areas and "feeding stations"). Further, the practice of releasing cats (neutered or not) into the Park is in violation of State, County, and District ordinances and is, therefore, not available as a management practice.

Comment: 14. The "suitability of habitat" should be monitored first, monitoring of "wildlife populations" should be secondary.

Response: The suitability of various habitats has been described in the Resource Analysis. The Natural Resources Management Plan gives policy to guide the management of that habitat and also gives policy to monitor the populations of certain "indicator" species so that the District can determine the success or failure of its management practices.

Comment: 15. Enhancing water flows in Wildcat Creek would benefit more animals than fish.

Response: Agreed.

Comment: 16. Automobiles and bicycles should be excluded from Tilden Park as a method of reducing the abandonment of dogs and cats in the Park.

Response: There is no evidence of a correlation between automobile or bicycle access and the rate at which dogs and cats are abandoned in the Park. Thus, there is no basis for prohibiting vehicular access as a method to limit the abandonment of domestic pets.

Comment: 17. Live traps for dogs could accidentally trap children.

Response: The live-traps used by the EBRPD could be easily opened by a child who may have entered it not knowing what it is. These traps are generally set in unobtrusive areas where this kind of event is not likely to occur; this has not been a problem in the years of trapping to date.

- Comment: 18. Bicycle use of trails may reduce the suitability of trailside areas for wildlife due to a loss of tranquility.
- Response: There is no evidence that bicycle use of trails has any effect upon the wildlife habitat value of adjacent areas. The bicycle traverses a trail more rapidly than other public trail uses thus minimizing the duration of any disruption of wildlife.
- Comment: 19. New trails should avoid critical wildlife breeding, foraging and shelter areas.
- Response: Agreed; this was among the considerations used in preparing the proposed trail alignments.
- Comment: 20. The U.C. Museum of Vertebrate Zoology can be called upon to provide expertise for wildlife management questions.
- Response: Agreed; District staff welcomes input from this organization and regularly seeks advice from them.
- Comment: 21. Protective management of the Special Protection Units should be automatic upon Board adoption of the LUDP.
- Response: It is.
- Comment: 22. The IPM Specialist should confer with a wildlife specialist before undertaking control of artichoke thistle encroachment.
- Response: Agreed; this is routinely done.
- Comment: 23. The District's Public Safety Officers should be required to enforce the portions of Ordinance #38 which prohibit feeding of cats.
- Response: Agreed.
- Comment: 24. The District should consider additional staff to deal with wildlife management.
- Response: This is being done.
- Comment: 25. Errors on page 119; substitute "brushlands" for eucalyptus and delete ground squirrels.
- Response: This has been done.
- Comment: 26. We suggest that the pools be developed as true vernal pools, that is, supplied with water only in the "normal" wet season so that native plants and animals will be supported.
- Response: The District will not "supply" water to these pools. They will be configured to catch and hold rainfall as long as weather conditions allow.

3. Water

Comment:

1. Stream restoration should not take place before the watershed study promised in the Wildcat Creek LUDP.

Response:

Policies and required actions in the water section of the Plan have been drawn from a draft water management plan prepared for the entire watershed. Additional site specific study is underway with additional analysis also planned.

Comment:

2. Concerns have been expressed both in favor of and in opposition to the dredging of Jewel Lake.

Response:

The dredging of Jewel Lake is a maintenance measure for retaining an open water pond suitable for fish. During the past high runoff years, Jewel Lake has been significantly reduced in volume due to sediment flowing down Wildcat Creek and from the adjacent hillside. Although much of this erosion can be prevented and catch basins can be installed upstream of Jewel Lake to intercept sediment, Jewel Lake will continue to act as a catch basin, ultimately filling in to a point where the current population of lake dwelling fish and the native population of rainbow trout currently established between Jewel Lake and Lake Anza will be jeopardized. This is why periodic dredging is necessary.

Comment:

3. Rainwater with a pH of 5.25 has been recorded at TNA but is not addressed in the Plan except in regards to fish.

Response:

Excessive acidity of rainwater is a growing problem surrounding many heavily industrialized and urbanized areas. Fortunately, in our area the soils have a buffering capacity unlike those in the eastern United States or Europe. This buffering capacity raises the pH of rainwater once it falls to the earth. The "acidic boundary" or range of pH for fish is much the same as it is for many organisms occupying the same habitat. Many of these species have evolved together in this area. Therefore, water quality suitable for rainbow trout, is also suitable for all the native species found in Wildcat Creek. Much of the current and recent research on water quality effects has been conducted on rainbow trout (and stickle back). It is, therefore, prudent to determine the effects of water quality changes on other species of the Wildcat Creek ecosystem based on research conducted on these two fish species.

Comment:

4. Riparian habitat warrants protection.

Response:

In areas where riparian vegetation is disturbed, causing warming of the creek water, reestablishment of indigenous riparian species is included in the NRMP.

Comment:

5. The NRMP should give water quality and quantity requirements for steelhead.

- Response:** Preliminary water quality studies of Wildcat Creek have indicated that sufficient water flows exist to allow steelhead and rainbow trout to migrate and reproduce in Wildcat Creek during most "normal" conditions. The decision to reestablish trout and steelhead were supported by the California Department of Fish and Game in 1983.
- Comment:** 6. The pumping of water from Tilden Park wells to augment stream flows during dry periods has been questioned as to its value and necessity.
- Response:** The EBRPD is investigating several old wells in Tilden which could be used to augment flows in Wildcat Creek, thereby maintaining stream habitat during extremely dry periods and avoiding fish mortality due to diminished flows. These wells, in the Golf Course and Botanical Garden area, were used in the late 1800's for domestic water. Groundwater recharge tests on one well indicates an excellent source of recharge in that area which would not be depleted by the relatively small amounts of water removed for stream augmentation.
- Comment:** 7. The proposal for the dredging of Jewel Lake needs quick action, along with measures to halt the erosion from the western hillside and the flow of runoff on the road and the flow of water in the boardwalk area. Also, it would be beneficial to the regeneration of plants and animals if this area could be restricted until sufficiently recovered.
- Response:** The NRMP includes erosion control measures on the western hillside and areas around the Environmental Education Center (road and boardwalk area) in Policy and Required Actions on page 49.
- Comment:** 8. The Golf Course pond dredging that occurred last spring was sloppily done. A watershed study could provide best alignment for this sensitive area.
- Response:** Under terms of the concessionaire agreement, maintenance of the silt catchment basins is the responsibility of the concessionaire. The concessionaire will be notified of the need to obtain a Fish and Game Stream Alteration Permit and recommended techniques for dredging will be provided. No realignment of the Creek within the Golf Course is planned.
- Comment:** 9. There is a need to handle water flows from parking lots, the Corporation Yard and the Steam Train.
- Response:** The LUDP includes eventual removal of vehicle maintenance operations at the Corporation Yard; the largest potential source for petrochemical and other related contaminants. There have been no quantifiable water quality impacts from existing roads or parking lots affecting Wildcat Creek. If water quality degradation is ever demonstrated, corrective actions will be considered.

- Comment: 10. The lack of energy dissipaters throughout the Park is causing gullying and bank erosion.
- Response: The provision of energy dissipaters and appropriate water conveyance drop structures to minimize erosion and to correct existing problem areas throughout the Park will be included in specific capital improvement plans to correct gully and bank erosion problems.
- Comment: 11. The proposal to build ponds should be studied as part of the watershed plan.
- Response: Construction of two small vernal pools can be accomplished with District resources or as a project by volunteer groups. These "ponds" are to be shallow gently sloped areas to trap seasonal runoff and will not require formal engineering or constitute a significant factor in the water regime of the watershed.
- Comment: 12. Remove structures near Wildcat Creek such as the children's play area, tennis courts and pony rides if deemed necessary to protect the creek.
- Response: The facilities mentioned with the exception of the Tennis Courts are an integral part of the park experience for many users. Measures included in the NRMP to control runoff, etc. are felt to be sufficient to mitigate the potential impacts of these uses.
- Comment: 13. A significant portion of the existing erosion and water quality problems stem from current inadequate road and trail maintenance and drainage practices, vegetative clearing on steep unstable slopes and uncontrolled stream channel problems.
- Response: The NRMP commits the District to monitoring and correcting these problems.
- Comment: 14. Water quantity and quality problems need further refinement, and stream channels should receive attention to prevent erosion.
- Response: Annual watershed monitoring and inventories will assist in identifying key areas in need of attention.
- Comment: 15. What amount of water do you hope to develop? What is water need for maintaining the aquatic habitat? Develop more completely your aquatic habitat management problems; lack of water, water quality, sedimentation, etc.
- Response: Maintenance of a live streamflow downstream through Tilden and Wildcat Canyon Regional Parks is the desirable objective. Further investigation will indicate if there is sufficient water available to achieve this.
- Comment: 16. Trail siting and signing are an aid to the problem of erosion and sediment but are not believed adequate solutions to the problem. You should provide access points to the riparian zone but not

unrestricted use, if such use is damaging. Other solutions should be investigated.

Response: Comment noted.

Comment: 17. Reexamine your erosion prone areas and define practical means of establishing vegetative ground cover and stopping major serious erosion. You should state their locations, extent, correction costs, etc.

Response: This is beyond the scope of the NRMP. Mapping of the Creek and culverts draining into the Park is being carried out as a first step in a long term plan to develop specific corrective strategies.

Comment: 18. Sediment collection basins requiring periodic removal of sediments are expensive and believed impractical for solving your problems. The stabilization of the soil in place is preferable.

Response: Control at the source is the ultimate and most desirable goal but other measures are also warranted.

Comment: 19. It is important to protect riparian zones. Innovative ways are available to reduce effects of trampling (e.g., placement of large rocks, planting native blackberry, etc.).

Response: Comment noted.

Comment: 20. The EBMUD supports proposed EBRPD efforts to minimize erosion and undercutting in Wildcat Creek, downstream of Jewel Lake. The Wildcat Shaft, appurtenant to the San Pablo Raw Water Tunnel, is located in this area and has active sloughing and erosion occurring in the immediate vicinity. Although the shaft is in no immediate danger, preventative measures will be mutually beneficial.

Response: The stabilization of the bank below the Jewel Lake spillway is one of the major bank erosion problems requiring attention. Other problem areas have been identified with planned corrective actions as staff time and monetary resources permit.

Comment: 21. Change "water resources" to water quality, covering quantity also if this is feasible.

Response: A more specific discussion of water management policies and required actions is given in the "Water" section of the NRMP.

Comment: 22. The volume of Jewel Lake is 6 acre feet, not its surface area.

Response: The text has been corrected.

Comment: 23. At Jewel Lake the focus should be on erosion prevention rather than dredging.

Response: Even with best efforts towards erosion control, because of its setting, Jewel Lake will continue to serve as a silt catchment and, therefore, require periodic dredging.

Comment: 24. The integrated pest management program should assist in preventing incidental pollution by limiting the use of pesticides and fertilizers in riparian zones.

Response: The District's IPM policy does not specifically restrict the use of fertilizers. It does, however, provide guidelines on materials, methods and practices for the use of pesticides. The District will continue its policy of reviewing all proposed pesticides to prevent misuse of such chemicals in parklands. No specific guidelines are enforced for riparian zones.

4. Geotechnical/Soils

Comment: 1. Consultation with academic or other experts could hopefully lead to trails that seem less prone to erosion than some of those recently established. Where erosion is successfully controlled as along Canon Road, perhaps native species could be established before exotics (Scotch Broom?) take over.

Response: The policies under soil erosion include identifying and minimizing accelerated soil erosion. District staff will continue to be trained by erosion control experts as stated under Required Actions. Additionally, included in the Actions section it is stated that grass seeding or planting of native vegetation will be undertaken in areas of bare soil that are subject to surface erosion.

Comment: 2. The proposed "improvements" in the Golf Course Driving Range are on an enormous scale. Has the necessity of the project and the effect of moving this amount of earth been fully studied for environmental impact (run-off, etc.)?

Response: Any reshaping or earth movement will include adequate erosion control and drainage to prevent accelerated erosion or other environmental impacts.

Comment: 3. It appears that much of the erosion is caused by inappropriate trail use. In particular, horse and bicycle use is taking a severe toll on many of the more fragile and steeper trails. Therefore, we propose that the District develop within the Draft Plan a policy restricting trail use of bicycles and horses.

Response: The District trails are generally intended for multiple use. Excessive erosion is addressed under the soil erosion and water sections of the plan. As stated, park staff will monitor conditions during winter months and close trails as needed.

Comment: 4. Approaches involving collection of sediments in catchment basins, as proposed, are both costly and ineffective in solving the basic cause of soil erosion and sedimentation problems. One must give priority to locating the erosion sources and reducing it at the source.

Response: Causative factors are discussed under the background sections of Soil Erosion and Mass Wasting and include both manmade and natural causations. The need to keep sediment in place is implicit and is discussed under Required Actions. The priority of locating erosion sources is specifically addressed and is reflected in the statement that erosion sources will be identified and mapped.

Comment: 5. Avoid construction, wherever possible, during the wet season, which will affect drainage and erosion.

Response: This is part of the NRMP.

Comment: 6. Explain the importance of Canon Drive, key problems and action required.

Response: The significance of Canon Drive is explained in the second paragraph of the Background discussion of the Mass Wasting portion of the Geology section of the Plan.

Comment: 7. Saying "to the maximum extent possible" and "as often as necessary" in regards to the actions required to deal with the Meadows Slide at Central Park Drive is not adequate for a description of the problem nor its solution.

Response: The policy implies that no repair work will be performed until it is required for the passage of traffic.

Comment: 8. The land slippage which removed the shoulder of Wildcat Canyon Road about 1/10 mile west of Inspiration Point is not mentioned. This presents a hazard to hikers, bicyclists and motorists and should be repaired.

Response: The District will work with the County to have the roadway repaired.

Comment: 9. In the area near the Corporation Yard, the lack of energy dissipaters is having a bad effect on the watershed in this area--a lot of gullyng and bank erosion.

Response: Identification, mapping and corrective action on sites of accelerated erosion is specified under required actions.

6. Cultural Resources

Comment: 1. Why is no mention made of the cultural resources identified in the TNA Interpretive Master Plan?

Response: Individual cultural resources have been identified in the Tilden/Wildcat Resources Analysis. Additional text has been added to the NRMP to address the commentor's concern.

C. FACILITIES AND CIRCULATION

1. Open Space and Visual Aspects

Comments:

1. In protecting against encroaching vegetation the District must make sure wildland resources will not be jeopardized.
2. What vegetation will be removed at viewsheds?

Response: Eucalyptus branches will be thinned below the stone circle overlook along Sea View Trail to improve views west to San Francisco Bay. Vollmer Peak bears little resemblance to its former name "Bald Peak" because of the mature groves of Monterey and Ponderosa Pines growing on the peak's north and west flanks. A minimum of these trees will be thinned to preserve this historic vista point.

Comment: 3. Planting of native trees should be "true" natives.

Response: Indigenous native plant species will be retained in natural areas.

2. Circulation and Parking

a. Public Roads

Comments:

1. Are service roads all necessary and can they be justified in an annual maintenance program?
2. Roads graded every year cause soil to be washed away contributing to creek siltation. Yearly grading should be reconsidered.

Response: The District recognizes the need to restrict grading of service roads to prevent the siltation of creeks. Service roads in Tilden Park are not routinely graded on an annual basis. Each year the park supervisor and fire chief determine the minimum amount of grading required to keep critical service and fire response roads passable. Grading is monitored by the park supervisor. Several sections of service roads in Tilden Park (e.g.: Selby, Wildcat Gorge, Loop Road) have not been graded and are changing over from service roads to hiking/riding trails.

Comment: 3. The comment "Those who use the Park but are not neighbors tend to be less concerned with the automobile traffic and more interested in the recreational and open space opportunities" should be stricken.

Response: The sentence was deleted.

b. Trails and Service Roads

All trail maintenance comments have been referred to maintenance supervisor.

Comment: 1. Can a few of the TNA trails be opened to hikers with dogs?

Response: The maintenance and visitor use policy for Tilden Nature Area reflects the intent to preserve and maintain this area as wildlife habitat and for the interpretive programs held there. Park visitors with dogs are prohibited from TNA trails because the presence of their animals inhibits wildlife activities, thereby, diminishing the opportunity for visitors to observe wildlife animals within TNA.

Comments: 2. There is a concern that the Tilden Trail along Wildcat Creek south of the Botanic Garden will have an impact on creek habitat.

3. It is not clear if the Tilden Trail is going to be paved the whole length.

4. There are concerns that Tilden Trail will require sidewalks, or asphalt surfaces and accommodate bicycles and skateboards.

Response: The Tilden Family Trail will incorporate sections of existing trails and roads into route: Vollmer Peak Trail, Anza View Drive, the Selby Trail and an informal path extending from Stream picnic area to Meadows playfield. These sections of trail will retain their present unpaved dirt or grass surfaces (except for Anza View Drive, an existing paved road). The only section of Tilden Trail requiring construction is between north of the Merry-Go-Round and Alder Picnic Area. The hard surfaced sections of the trail already exist between the Botanic Garden and the Brazil Room and Lake Anza and the Merry-Go-Round (the only roadside trail sections). The Tilden Trail will not require sidewalks or asphalt surfaces and will be designated as a walking trail unsuitable for bicycling, skating and horse back riding.

Comment: 5. Could loop trails be included in the Plan?

Response: New loop trail links are already included in the Plan. See the discussion on Page 64 and Figure 12 on page 61.

Comment: 6. Can trails be jointly developed with EBMUD and University of California?

Response: The District will develop a trail head at the Tilden Corporation Yard that connects existing park trails with public trails through East Bay Municipal Utility District lands to San Pablo Reservoir. The District will develop a trail link from this trailhead through University of California land to Claremont Canyon.

Comments: 7. The Plan should include a policy for periodic evaluation and monitoring of trail use.

8. If there a policy for off trail foot travel? Is there a trail map for public use?

Response:

A published trail map exists for Tilden Regional Park and is available at all park facilities. The map directs visitors to trails designated for equestrian, bicycling, hiking, and disabled use. Park regulations discourage the use of bootleg trails as do field staff, who block bootleg trailheads with fences and slash piles and who do not maintain them. Field staff also patrols trails to deal with erosion, litter, pruning and sign maintenance needs. The field staff continuously monitor, and evaluate trail use.

Comments:

9. Trails prohibited to bikes need to be signed, especially Wildcat Gorge Trail because of its sensitive habitat.
10. Eliminate bicycle use on trails.
11. Prohibit bicycle and equestrian use during the rainy season.

Response:

The Plan will be revised to eliminate bicycle use on Wildcat Gorge Trail because it is within sensitive riparian habitat. The trail will be signed to inform the public of this restriction. The Park Advisory Committee is currently reviewing policy regarding bicycle use of trails and will consider the issue of increased trail restrictions.

Comment:

12. Why is there no trail to the caves above Wildcat Gorge?

Response:

There is a hiking trail that begins behind the Merry-Go-Round restroom and ends at a safety railing and rock overhang above the Wildcat Gorge caves.

Comment:

13. The Parks should consider charging a fee to license equestrians who use trails to cover trail repairs.

Response:

It would not be cost effective for the District to establish, administer, and enforce a licensing fee for equestrian use of trails.

Comment:

14. EBMUD opposes a trail head and connection linking Tilden Park to Siesta Valley until the impact of the planned Berkeley Shakespeare Festival facilities on the surrounding watershed have been evaluated.

Response:

The trail link from Tilden to Siesta Valley will not be included in the Plan because the Water District currently intends to maintain Siesta Valley as passive open space.

Comment:

15. The Park District should update the trail manual.

Response:

The District trail manual is in the process of being revised. A draft trail manual is presently being reviewed by field, planning, and design staff and a final document will be completed by January 1989.

c. Parking

Comment: 1. Will providing more parking facilities impact the wildland values of Tilden park?

Response: Without exception, all proposals of new and expanded parking areas, occur on previously developed sites within the designated recreation areas of the Park, leaving the wildland areas intact. The additional parking areas will serve popular, heavily used facilities. Visitors using the additional parking spaces will continue to direct their activities be to these facilities. New parking areas will reduce illegal roadside parking which damages the land next to the roadside.

Comment: 2. New Botanic Garden parking should be moved as far north as possible to minimize its visibility from the Brazil Room patio.

Response: The new Botanic Garden parking area will be located to minimize its visual impact from the Brazil Building Patio.

Comments: 3. Locate the equestrian staging area separately from children and crowds and limit parking of cars.
4. An alternative site for equestrian staging is the Corporation Yard once it is removed.
5. The equestrian staging area should have room for six rigs, limit automobile parking, and have a circular layout.

Response: The equestrian staging area will be located at an existing overflow parking area above the Corporation Yard to avoid the children, crowds, and automobiles of the Little Train visitors. The staging area will have a signed circular layout to serve primarily horse trailers (six rigs) and a limited number of automobile spaces for hikers wishing to use the Vollmer Peak Trailhead. A separate overflow parking area will be provided at the nearby Little Train to absorb the crowds of visitors and children to this facility. Although the Corporation Yard does have potential for equestrian staging, several difficulties complicate this alternative site. The relocation at the District-wide Corporation Yard will require an extensive and undetermined period of time to implement. The development of an equestrian staging facility would be delayed until the Corporation Yard was relocated. Additionally, field staff personnel and equipment for Tilden Park will remain on the site. An equestrian staging area in this location Would conflict with field staff operations.

Comment: 6. The staging area should be planned in consultation with an experienced horseman from the local horsemen's association.

Response: Staff has received information concerning the equestrian staging area from members of the Tilden/Wildcat Horsemen's Association throughout the planning process.

Comment: 7. Save the old apple trees at the bottom of the Brazil Room lawn when the Botanic Garden parking lot is constructed.

Response: Every effort will be taken to preserve these trees during the construction of the Botanic Garden parking area.

d. Public Transportation

Comment: 1. The District should further explore better A C Transit service to Tilden Park.

Response: The District is working with AC Transit to expand limited year-round service on Route 9, the "Summer Park Service" line. The District and AC Transit will work together to secure funding for this expanded service. AC Transit plans to improve the headways (length of time between buses) of the routes to Tilden. These were described in the Plan.

4. Recreational and Interpretive Facilities

a. Picnic Areas and Turf Meadows

Comment: 1. Upgrading the equestrian use of the old 9 hole golf course site will potentially create a visual and environmental impact on the surrounding natural unit.

Response: The equestrian camp reserve group picnic area has been deleted from the Land Use-Development Plan.

Comment: 2. How much natural environment will be lost to new picnic areas and turf meadow?

Response: Natural environment will not be lost to new picnic areas and turf meadow. There is now only one picnic area proposed in the Land Use-Development Plan. It is a reserve group picnic area that will be restored to its former location at Anza View. This site is within a eucalyptus grove in a designated recreation unit off Anza View Drive below the Brazil Building. Picnic tables will be replaced at their former locations within the grove without vegetation removal or loss of natural habitat. Only one area of turf meadow is proposed in the Plan. Turf meadow will replace the tennis courts (not a natural environment) at the bottom of Canon Drive.

Comment: 3. Could the equestrian staging serve as a picnic area?

Response: The equestrian staging area is isolated from other park uses (e.g.: picnic areas) to maximize the safety of park visitors when loading and unloading horses.

d. Botanic Garden

Comment: 1. Solve the Botanic Garden problems described by more innovative professional solutions.

Response: The solutions to the Botanic Garden were developed by professional staff.

Comment: 2. An informational kiosk should be included at the new entrance to the Botanic Garden and a better developed trail between the new entrance and existing visitor facilities.

Response: An informational kiosk and appropriate trail improvements are included in the Plan.

Comment: 3. Botanic Garden issues should include the possible future need to expand the Garden and a policy for determining need should be developed.

Response: District staff considered a possible future expansion of the Botanic Garden. Several expansion sites were considered. The optimum site for the Botanic Garden is across Wildcat Canyon Road on slopes with rock outcrops and thin soils. This area, however, is also Alameda whipsnake habitat. Fencing and developing this particular site for a Botanic Garden expansion would have a negative effect on wildlife habitat. Additional space for the Botanic Garden's propagation of sensitive California native plants will be provided at the California Native Plant Society growing ground in the Old Driving Range.

i. Pony Ride

Comment: 1. Don't allow ring expansion of the Pony Ride.

Response: The popular Pony Ride facility will not expand outside it's present location. The Plan will allow an additional "sweep" or riding wheel for young children to be placed next to the existing sweep.

j. Steam Trains - Golden Gate Live Steamers

Comments:

1. The GGLS track extension affects habitat and serves a very small special interest group that has little or no benefit to the public.
2. The GGLS track extension raises the question of why the Park District is subsidizing this hobby by providing utilities to a hobby group.

Response: The Golden Gate Live Steamers proposal is a 1/4 mile loop track extension less than a one foot wide track through a grove of planted redwoods. The track extension is within the existing fenced recreation area used by both Golden Gate Life Steamers and the

Redwood Valley Railroad since 1971. There is no evidence that this track expansion will affect habitat.

The District provides utilities to the site occupied by both the Golden Gate Live Steamers and Redwood Valley Railroad and all other facilities within the Park. Redwood Valley Railroad pays a license fee based on a monthly percentage of the total gross receipts. Although, Golden Gate Live Steamers club members operate the model railroad, the public is permitted to view the model trains and to enjoy a short ride around the facility in the large trains. The District will work with the Golden Gate Live Steamers on plans to provide increased public access to this facility.

1. Tilden Nature Area

Comment: 1. Relocate the boundary of the Tilden Nature Area to its historic location at the fence line and gate in Wildcat Canyon.

Response: The Plan has been revised to include the relocation of the Tilden Nature Area boundary line from the ridgeline above Jewel Lake to its historic location along the fence line and gate in Wildcat Canyon.

m. Rotary Club Assembly Area/Peace Grove

Comments:

1. Development of the Peace Grove ceremonial site will create an additional intrusion in the Nature Area and may also impact on an area used by newts during the non-breeding season.
2. The Rotary Peace Grove is in the nature area but serves no natural or educational function.

Response: The Plan has been revised to eliminate development of the Peace Grove ceremonial site because of potential impact on wildlife habitat. The Rotary Club will be permitted to continue their annual dedication ceremony.

Memorial Groves

Comments:

1. Memorial grove plantings should include only native oaks, other broadleafed trees, and shrubs. If redwoods are planted, they fit better into lower contours with adequate natural water.
2. The District should adopt an explicit policy that memorial plantings be limited to native trees on sites where they would be expected to occur naturally.
3. Tilden needs a policy restricting the use of bronze plaques and other appropriate ways to channel donators' generosity.

Response:

The District no longer allows the planting of new memorial groves on East Bay Regional Park District land. People wishing to plant a tree in memory of someone may make a donation to the Memorial Tree Fund. Monies from this fund are used to purchase trees (or other plants) that are appropriate to the design and native vegetation of the Park. New tree plantings in Tilden Park are proposed only in suitable and limited areas within the fuelbreak. Native broadleaf trees and coast redwoods will be used in moist canyons and swales.

The Recognition Policy is in the process of being revised by the Public Affairs Department and reviewed by the Park Advisory Committee. The revised Recognition Policy will include a statement requiring all donations to be used in a manner in accordance with the setting of the Park. The policy will also further restrict the use of plaques (of all materials) as a visible means of recognition.

Tennis Courts

Comment:

1. The District is willing to maintain a playfield for baseball, volleyball and other field games and should retain the tennis courts for public use.

Response:

The 1988 Master Plan states "The District will provide a system of regional parklands and regional trails that will emphasize a variety of significant outdoor recreational and educational activities." The Master Plan does include turfing meadow areas for outdoor sports and other unstructured field games. It does not include tennis courts as a regional facility.

Additionally, the tennis courts require costly resurfacing and regrading of the surrounding lawn area to improve drainage. Capital improvement expenditures are made on facilities that serve regional populations rather than those primarily used by local residents. Tennis facilities are provided by city parks throughout the East Bay. Fifty-seven tennis courts are available, serving Oakland, Piedmont, Berkeley, and Albany, free of charge.

6. Utilities

Comments:

1. Aesthetics and cost of installing a water tank at Inspiration Point must be weighed against need.
2. Placement of the water tank at Inspiration Point is not identified; couldn't transporting tanks be used for dispensing, eliminating the need for construction.
3. Could it not be regarded as a "natural" part of an outdoors experience in the Bay Area that drinking water is not available on a trail, but can easily be carried in a car, bike, or canteen.

Response:

Inspiration Point is a major trailhead to Nimitz Way, one of the few hard-surfaced, all seasons trails in Tilden Park. This popular trail consistently receives heavy use by runners, hikers, and bicyclists. People with special needs (e.g.: parents with young children in strollers and visitors in wheelchairs) also frequently use Nimitz Way. Additionally, Inspiration Point is also a favorite destination of bicyclists and hikers on long treks originating in Orinda, Oakland, or Berkeley. Over the years and throughout the planning process, park users, ranging from experienced hikers to disabled persons have repeatedly requested drinking water at Inspiration Point.

The exact location of the water tank has not been determined. A transporter of potable water would service water tanks throughout the entire Park District and could not be exclusively used to dispense water in a single location.

Comment:

4. The Plan should stress the undergrounding of powerlines and elimination of utility lines as a priority action. Utility lines and towers destroy the feeling of parkland.

Response:

Staff agrees that utility lines interfere with the open space feeling of parklands. The District is actively seeking the funds required to underground utilities in Tilden Park. Where funding is unavailable, the District must delay action until utility lines need to be replaced at which point they would be constructed underground.

7. Quarry

Comments:

1. More specific decisions and action plans regarding the quarry are needed.
2. Eliminate the quarry as a source for large scale projects to prevent any further visual or environmental impact to this area of Tilden.

Response:

The Plan has been revised to restrict the use of quarry stone to small scale projects (e.g.: repairs to existing structures within Tilden Park) requiring only the use of hand tools. When the existing quarried stone has been utilized, the District will discontinue use of the quarry, and as part of the quarry closure plan, recontouring of the site will provide a safer topography.

Miscellaneous

Comment:

1. Include project cost estimates in the Plan.

Response:

Cost estimates for projects are prepared in the capital improvement phase of a Land Use-Development Plan, after the Plan is adopted by the Board. This procedural sequence is provided by the District Master Plan 1988 section C.4.

- Comment: 2. A statement of policy for setting priorities should be included in the Plan before development and environmental projects are implemented.
- Response: The Plan has been revised to include a section establishing priorities for natural resource and development projects.
- Comment: 3. Use figures for Lake Anza summer use, the Little Farm, the Environmental Center, and the Brazilian Room need to be included in the Plan.
- Response: The Plan has been revised to include use figures for these facilities.
- Comment: 4. A policy is needed for record-keeping for all facilities and concessions.
- Response: All facilities and concessions are required by their leases to submit daily and monthly attendance and revenue records to the District's Controller's office. In addition to maintaining records for audit, concessionaires must also provide an annual report detailing the status of their operation.
- Comment: 5. References to the Master Plan should be updated so that policies and required actions are consistent with the 1988 Plan.
- Response: All Land Use-Development Plan references to the Master Plan have been updated to reflect the policies of the 1988 Plan.
- Comment: 6. Low density camping facilities for homeless people should be included in the plan.
- Response: It is not District Policy to provide camping facilities for homeless people.
- Comment: 7. The Plan should include a recycling program.
- Response: A recycling program is being implemented in Tilden Park. Storage Units for recycled materials will be installed in 3 Park locations. The revenue generated from this program will be used for tree planting and picnic rehabilitation.
- Comment: 8. The areas west of Golf Course Road are shown incorrectly on Figure 7 and Figure 9.
- Response: Figure 7 and Figure 9 have been corrected.
- Comments: 9. The District should state that park users will be invited to participate in appropriate ways in implementing the Plan.
10. Consider establishing a county or state Conservation Corps Camp in certain parks for a period of years to implement land management plans.

Response: The District recognizes the value of volunteers and citizen participation in the implementation of the Land Use-Development Plan and the ongoing maintenance of the Park. There are several volunteer organizations that supplement the permanent field staff of Tilden Park; the California Conservation Society provides trail work and creek rehabilitation, the East Bay Conservation Society has undertaken bridge and retaining wall repairs projects, City of Oakland provides crews of court offenders who remove vegetation for fire clearance around picnic tables, clean gutters, and remove litter, the California Native Plant Society has assisted with weed abatement projects.

V. ENVIRONMENTAL IMPACT REPORT

General

Comment: 1. Are you considering the LUDP and NRMP equally for purposes of this EIR? Is this to serve as a blanket EIR to cover the lifetime of the Plan; if so, more specific data should be presented.

Response: The EIR is intended to cover both the LUDP and NRMP for the lifetime of the Plan. Sufficient detail has been provided given the general nature of the document. If the District ever considers activities which are not covered by the EIR, additional environmental documents will be prepared.

B. BIO-PHYSICAL ENVIRONMENT

1. Geology, Soils and Seismicity

Comment: 1. Are there plans for a dewatering basin "atop an old landslide"?

Response: Staff erred in its interpretation of the site's location on the geologic map used. The actual site chosen for the dewatering basin is not part of a slide and is adequate for the proposed use.

Comment: 2. The statement made about increases of soil erosion and sedimentation being unavoidable is unacceptable and untrue.

Response: Minor increases in erosion often occur even with the best mitigation measures.

Comment: 3. The massive grading proposed to improve the Golf Course, add additional picnicking, add parking spaces and even removal of the tennis courts, would have serious consequences and must be kept to a minimum. More explicit measures must be included to prevent erosion and its related impacts.

Response: Appropriate erosion control practices for all graded sites are outlined in the erosion portion of the geology section of the NRMP.

- Comment:** 4. Is there a problem with vegetation and ground squirrels on the face of the Lake Anza and Jewel Lake dams?
- Response:** The plan requires that vegetation and burrowing animals that could jeopardize the integrity of the dams will be managed in compliance with the guidelines of the Department of Dam Safety. At this time, there is no evidence this is a problem at either site.
- Comment:** 5. Have the environmental impacts of the proposed grading at the Golf Course Driving Range been adequately addressed?
- Response:** The environmental impacts of the undertaking have been adequately assessed. However, more explicit language has been added to the EIR.
- Comment:** 6. Provisions for vegetation and the emplacement of siltation structures at graded sites does not adequately describe the options available to you and their inevitable results.
- Response:** Comment noted. The task in this portion of the text is to identify the mitigation measures proposed.
- Comment:** 7. In response to a paragraph discussing potential impacts on park facilities due to seismic events, a comment was received stating: "This does not appear to be a satisfactory solution. Suggest you reexamine options."
- Response:** This is a description of a potential event, not a solution to a problem.
- Comment:** 8. The policy to limit wet-season construction is not explicit enough.
- Response:** Coupled with the other mitigation measures outlined, the text language is adequate to protect park resources.
- Comment:** 9. The mitigation measures in the geology section of the EIR do not mention best management practices.
- Response:** Management practices are discussed in the Natural Resources Management Plan with specific policy measures excerpted in the EIR.

2. Hydrology and Water Quality

- Comment:** 1. The suggestion has been made that the setting discussion of the hydrology and water quality section of the EIR should discuss the Jewel Lake sediment problem and its solution.
- Response:** Text has been added to address this issue.
- Comment:** 2. Golf Course improvements were omitted from the impacts section.
- Response:** Additional discussion has been added to the text. This discussion was not omitted, merely stated elsewhere (see Geology section).

Comment: 3. What are the environmental impacts from use of copper?

Response: The Plan mentions the use of copper sulfate to control algae. Actually, a copper compound (Strike) in a chelate form, with the copper bound by water molecules and kept in solution, is being used for the targeted planktonic algae.

Comment: 4. Is water quality effected by goat droppings?

Response: No impact has been identified relevant to pellet-like droppings near water courses. In any event, goats are not used in riparian zones.

4. Biology

Comment: 1. The expansion of the Botanic Garden would adversely effect the California newt.

Response: The 1985 expansion of the Botanic Garden which is recognized in the Plan, does not include or require extensive creek channel modifications similar to those carried out upstream. The minimal bank erosion protection which is needed will be carried out in a manner which will not preclude continued use of the creek as breeding habitat by the California newt.

Comment: 2. The equestrian camp is near a Special Protection Unit for the Alameda striped racer as well as a denning area for red fox.

Response: The equestrian camp has been deleted from the Plan.

Comment: 3. The annual bicycle motocross event runs close to the Alameda striped racer habitat.

Response: The Alameda whipsnake is an active and highly mobile snake. There is no evidence of having been run over on either roads or trails.

Comment: 4. The intermittent operation of the old quarry may adversely affect the Alameda striped racer.

Response: Hand collection of rocks from the quarry to repair the CCC stonework in the Park will not adversely effect the habitat of the Alameda whipsnake. When a closure plan is prepared and heavy equipment is used to work the quarry towards the planned final topography, use of the quarry area by the Alameda whipsnake will cease. After closure the quarry would again provide habitat for the Alameda whipsnake and the western fence lizard; its primary prey.

Comment: 5. A number of wildlife (e.g., insects, reptiles, amphibians and ground nesting birds), may be adversely effected by prescribed fires.

Response: The biota of California have existed in an environment of regular wildfires (including human-caused wildfires) for thousands of years.

Thus, while individual animals may succumb to the fire itself, populations are generally not adversely effected. A growing body of scientific evidence indicates that prescribed fires are less intense and smaller in area than wildfires making it easier for wildlife to escape and at a later time to recolonize the burned area.

Comment:

6. Prescribed burning during the last 6 months of the year could adversely effect individual striped racer snakes.

Response:

The protective restriction has been changed to specify that several days of cool temperatures (below 68 degrees F) must have occurred in the late autumn or early winter before a prescribed fire will be set in whipsnake habitat. This will assure that this rare snake will be inactive in its underground burrows during these fires. The management of whipsnake habitat by the use of prescribed fire is intended to avoid wildfire at other times of the year which could have severe effects on this animal.

Comment:

7. Prescribed fire, brush crushing, and goat grazing will have long-term impacts which threaten the ecological balance and reduce wildlife habitat values.

Response:

The ecological balance of the plant associations in Tilden Park consists of a series of changes called natural succession, punctuated by the periodic occurrence of wildfire. Immediately after a fire, herbs and grasses predominate, later the grasslands are invaded and may be taken over by brushland. Because of the semi-arid climate, dead plant material does not decay as rapidly as it is produced and a build up of fuel occurs. When there is sufficient fuel, a fire occurs either as a result of lightning or as a result of human activity. The greater the interval between fires, the greater the available fuel resulting in hotter and more extensive fires. More intense fire conditions result in greater mortality of wildlife and humans. The Natural Resource Management Plan recognizes this and includes management practices such as brush crushing and periodic prescribed fires which are cooler and more restricted in extent than the less frequent wildfires. The objective is to reduce the severity of fire effects upon wildlife. The Plan also includes the use of goats to maintain a fuelbreak along the edge of the Park which is adjacent to urban development in order to reduce the severity of fire effects upon humans.

Comment:

8. Brush crushing is listed in error on page 122 as a method of eucalyptus litter control.

Response:

The text has been corrected.

Comment:

9. The California newt should be added to the species listed on page 120 top paragraph.

Response:

This has been done.

Comment:

10. Why is there no mention of grazing or grazing impacts?

Response:

With the exception of the fuelbreak, grazing is not an existing or proposed use. Grazing in the fuelbreak is discussed in both the NRMP and the EIR, as are its potential impacts and associated mitigation measures.

Comment:

11. The statement that if goat grazing were mismanaged, there could be increased erosion and sedimentation, potentially affecting fish in Park streams and lakes, does not adequately address potential impacts.

Response:

Additional language has been added to the text to clarify this statement.

Comment:

12. The Tilden Trail along and near the creek bottom south of the Botanic Garden risks wildlife resources.

Response:

The area designated for trail use will be modest and, therefore, will not significantly impact existing resources.

Comment:

13. "Lomas Contadas" should be "Lomas Cantadas."

Response:

This correction has been made.

5. Noise

Comment:

1. Amplified sound at the Golf Course interferes with other park uses.

Response:

The loudspeaker has been redirected to ameliorate this concern.

Comment:

2. There is a lack of adequate assessment of impulsive noise sources.

Response:

Noise impact assessments take into account short-term impulsive noise sources when weighing nighttime and early morning measurements. Short-term impulsive sounds cannot be factored directly.

Comment:

3. Why are there no recommendations to use vegetative screening to buffer traffic noise?

Response:

Vegetation is not an effective noise barrier.

Comment:

4. The Tilden Resource Analysis states that noise amplification occurs within the Park due to its bowl-like setting. Why has this situation not been addressed here?

Response:

Any noise amplification resulting from the Park's physical attributes would be accounted for in the measurements taken by the District's noise consultant.

- Comment: 5. No noise amplification should be permitted in the Park.
- Response: Amplification is allowed only on a permit basis. Some of the present concessionaires have such permits.
- Comment: 6. The noise survey was cut in two.
- Response: Figures from the reports submitted to the District by the noise consultant were placed in the text where they were felt to be appropriate. Therefore, portions of these reports were placed in either the LUDP or the EIR.
- Comment: 7. The noise survey described in Table 4 (page 123) indicates averaging of noise over a twenty-four hour period. Decibel figures listed on page 139 should be added to Table 4.
- Response: Comment noted. Because the figures mentioned in Table 4 refer to a specific alternative which is not part of the Plan, staff feels it is more appropriate to segregate these figures as occurs in the Draft.

6. Visual and Aesthetic

- Comment: 1. Concern has been expressed over the visual impact of the Golden Gate Live Steamers track extension near the South Park/Grizzly Peak intersection.
- Response: The track extension is in an area of the existing site which would not be highly visible within or outside of the Park.
- Comment: 2. Equestrian Camp is highly visible from points in the Park.
- Response: The reserve group picnicking previously proposed here has been dropped.
- Comment: 3. The Old Quarry is very visible from Big Springs Trail.
- Response: Comment noted.

C. SOCIO-ECONOMIC ENVIRONMENT

2. Traffic

- Comment: 1. The projected traffic figures make clear that many more people will be using the same space in the future. How can this increase be accommodated without a total change in park experience?
- Response: As stated in the EIR, the majority of the projected traffic increase will be due to region-wide growth, with more drivers using park roadways enroute to other destinations. While this may affect park ambience, it is not expected to result in significant increases in facility use.

Comment: 2. Clearing brush and trees to improve sight distances for drivers is not enough; you need to control traffic risk through enforcement of speed limits.

Response: Brush clearing and tree limbing are proposed to increase safeguards for park users, in addition to the continued enforcement of traffic laws.

Comment: 3. You should explore a shuttle bus option with either total or partial closure of roadways, and with limited or no parking with the Park.

Response: The shuttle idea was explored. It was dropped because the expected weekend only ridership was not enough to make this project economically feasible, and because of the impacts associated with development of the necessary peripheral parking.

Comment: 4. Increases in parking will exacerbate already intolerable conditions.

Response: Most of the proposed parking is to replace exiting informal parking, thereby improving traffic safety. Additionally, some new parking is needed to meet existing needs at some facilities. Projected increases in parkland traffic will be primarily due to increased region-wide roadway use; not increased park use.

Comment: 5. Merely placing no parking signs will not eliminate use of replaced parking spaces; barriers should be erected.

Response: Increased enforcement of "no parking" areas is felt to be an appropriate remedy to deal with the potential problem.

Comment: 6. You need separation of automobile and horse trailers in the Corporation Yard parking lot.

Response: Design of the facility will take into account the need to ensure safety in circulation. The turning radius requirements for automobiles with horse trailers was a major consideration in determining the number of spaces that the facility could provide.

Comment: 7. The traffic section does not incorporate results of acid rain monitoring at the EEC.

Response: This data has not been collected long enough to be statistically useful. Staff will incorporate it into long range survey.

Comment: 8. The Plan does not adequately address the traffic-generating impact of additional parking and picnicking.

Response: The EIR addresses traffic impacts from new facilities. These impacts are addressed in terms of traffic projections, levels of service and volume to capacity ratios.

- Comment: 9. Tilden is overdeveloped and suffers from too much traffic.
- Response: Comment noted.
- Comment: 10. The analysis of the amphitheater is not sufficiently detailed. The provision of parking on the UC campus was not an option and should not be treated as such in the Plan.
- Response: The amphitheater was treated in much less detail than it would have been were it part of the Plan as per CEQA requirements. The referral to the use of parking on the UC campus was included because it was part of the original proposal.
- Comment: 11. Increased use of the Rotary Peace Grove (150 people) will result in traffic safety concerns along Nimitz Way.
- Response: Development of an assembly area for the Rotary Peace Grove has been deleted from the Plan.
- Comment: 12. The traffic survey was cut in two.
- Response: Figures from the report submitted to the District by the traffic consultant were placed in the text where it was felt to be appropriate. Therefore, portions of the report were placed in either the LUDP or the EIR.
- Comment: 13. There are arithmetical errors in traffic calculations.
- Response: Two typographic errors were found in Tables 10 and 11 of the EIR and have been corrected.
- Comment: 14. I would like to see the plan draw logical conclusions, such as if this is projected, then this will happen. For example, if we have a 10% increase in traffic in five years and a 20% increase in 10, it follows that: we need to keep use figures to determine carrying capacity; and we need additional funding and staff to operate.
- Response: Comment noted.
- Comment: 15. The EIR does not adequately address the traffic impacts of the Plan.
- Response: A more detailed traffic analysis is included in the original consultant's report. The pertinent elements of this report have been excerpted in the EIR and are adequate for CEQA compliance.
- Comment: 16. Please preserve the CCC stone guide signs at park intersections by including them as the central focus of a one-way roundabout.
- Response: It is unlikely that a round-about intersection would be as safe as a standard "T" configuration and thus, this solution would not solve the traffic safety issue. Roundabouts have been found to be successful in

areas of high driver familiarity with them; this is not the setting in Tilden. When the intersections are reconfigured into "T" configurations the CCC stone work will be retained; the Plan has been changed to reflect this.

Comment: 17. Parking is badly needed on Wildcat Canyon Road to accommodate users of Sea View Trail.

Response: There is sufficient room on the south side of Sea View Trail to accommodate three to four vehicles. To ensure adequate clearance at the trail entrance to accommodate authorized vehicles, the current "no parking" signs will be changed to say "no parking from this point on." In addition, approximately eight parking spaces are available on the north side of the road with a crosswalk in between. The clearing of overhanging limbs and brush, where necessary, for approximately 150 feet on either side of the crosswalk will provide for pedestrian safety.

Comment: 18. The solution to traffic congestion is improved public transportation rather than more parking.

Response: The Plan includes increases in public transit service to the Park. Additionally, increases in parking are needed at some facilities to meet existing needs. Without the creation of additional parking, illegal and unsafe parking practices will continue.

D. IMPACT OVERVIEW

1. Unavoidable Adverse Impacts

Comment: 1. The statement made about increases in erosion and stream sedimentation for the first year or two following grading projects as being unavoidable is untrue.

Response: This is incorrect. Even with the best efforts to control erosion at graded sites, some increased erosion is to be expected.

Alternatives

Comment: 1. The remark concerning the alternate CNPS site at the Corporation Yard is incorrect; this is not one of "two environmentally superior alternatives." The site is unacceptable for CNPS purposes (e.g., too foggy).

Response: From an environmental impact viewpoint, the Corporation Yard site would be preferable because of the lack of the necessity for grading and fencing and their associated impacts. Additional language has been added to the text to address the CNPS concern.

Comment: 2. The alternatives discussion should consider various "time rates to bring degraded conditions up to acceptable standards", and should include provisions for input from Land Stewardship biologists.

Response:

The long-term perspective of the Land Use Development Plan and of the alternatives discussion is appropriate, and is required under State CEQA Guidelines, Section 15126(e). Land Stewardship biologists are continually available to advise Operations staff about appropriate management practices.

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